

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2500.—VOL. LIII.

LONDON, SATURDAY, JULY 21, 1883.

[WITH SUPPLEMENT.] {PRICE SIXPENCE BY POST, £1 4s. PER ANNUM

**M. R. JAMES H. CROFTS, STOCK AND SHARE BROKER AND MINING SHARE DEALER.**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.  
BUSINESS negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week. MINES INSPECTED.  
BANKERS: CITY BANK, LONDON.—SOUTH CORNWALL BANK, ST. AUSTELL. TELEPHONE NUMBER 1003.

**SPECIAL DEALINGS in the following, or part:—**  
50 Ash Minor, 45 Gawn, 5s.  
50 Almada, 12s. 50 Gunnis (Clit), £1 6s.  
50 Bedford, £1 12s. 100 Hingston Down, 4s.  
50 Bisham, £2 6s. 3d. 100 Hoover Hill, 4s. 3d.  
50 Bisham, £2 6s. 3d. 25 Home Mines Trust, 11s.  
50 Bisham, £2 6s. 3d. 200 Herodfoot, 3s. 6d.  
50 Bisham, £2 6s. 3d. 75 Indian Consol., 3s. 3d.  
50 Bisham, £2 6s. 3d. 100 Indian Glenrock, 3s. 3d.  
50 Bisham, £2 6s. 3d. 25 Indian Phoenix, 3s. 3d.  
50 Bisham, £2 6s. 3d. 50 Indian Trevel, 3s. 3d.  
50 Bisham, £2 6s. 3d. 50 Kapanga, 7s.  
50 Bisham, £2 6s. 3d. 25 Killfret, £2 4s. 6d.  
50 Bisham, £2 6s. 3d. 50 Kit Hill, 2s. 6d.  
50 Bisham, £2 6s. 3d. 70 La Plata, 20s.  
50 Bisham, £2 6s. 3d. 25 Langford, 5s. 9d.  
50 Bisham, £2 6s. 3d. 50 Last Chance, 2s. 6d.  
50 Bisham, £2 6s. 3d. 20 Leadhills, £2 4s. 6d.  
50 Bisham, £2 6s. 3d. 50 Marke Valley, 18s.  
50 Bisham, £2 6s. 3d. 100 Mon, 4s.  
50 Bisham, £2 6s. 3d. 50 Mounts Bay, 6s. 6d.  
50 Bisham, £2 6s. 3d. 50 Myre Gold, 5s.  
50 Bisham, £2 6s. 3d. 100 New Caradon, 9s.  
50 Bisham, £2 6s. 3d. 50 New Caradon, 9s.  
50 Bisham, £2 6s. 3d. 50 New Emma, £2 1s. 3d.  
50 Bisham, £2 6s. 3d. 50 New Quebrada, £2 4s. 6d.  
50 Bisham, £2 6s. 3d. 100 N. Blue Hills, 2s. 3d.  
50 Bisham, £2 6s. 3d. 25 New Kitty, £2 3s. 9d.  
50 Bisham, £2 6s. 3d. 50 N. Herodfoot, 3s.  
50 Bisham, £2 6s. 3d. 100 New Monde, 7s. 6d.  
50 Bisham, £2 6s. 3d. 20 North Penstr., 12s.  
50 Bisham, £2 6s. 3d. 25 New W. Caradon, 4s. 9d.  
50 Bisham, £2 6s. 3d. 50 Old Shepherds, 10s.  
50 Bisham, £2 6s. 3d. 200 Oregum, 2s. 6d.  
50 Bisham, £2 6s. 3d. 50 Organos, £1 13s. 9d.  
50 Bisham, £2 6s. 3d. 50 Orita, 17s.  
50 Bisham, £2 6s. 3d. 25 Polrose, 4s.  
50 Bisham, £2 6s. 3d. 50 Penhall, 7s. 6d.  
50 Bisham, £2 6s. 3d. 50 Potosi, 18s.  
50 Bisham, £2 6s. 3d. 100 Port Phillip, 3s. 3d.  
50 Bisham, £2 6s. 3d. 100 Port Phillip, 3s. 3d.

\* SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.  
SPECIAL BUSINESS at CLOSE PRICES in all Market TIN, COPPER and LEAD SHARES.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**RAILWAYS — SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**FOREIGN BONDS — SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**AMERICAN AND CANADIAN STOCKS AND SHARES — SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**GOLD AND SILVER MINES — SPECIAL BUSINESS in ALL** marketable INDIAN GOLD SHARES, and in California, Callao, "Bis," Gold Coast, Guinea Gold Coast, New Callao, West Callao, Tolima A, Tolima B, La Plata, Rio Tinto, Frontino and Bolivia, Potosi, Chile, Nouveau Monde, Bisham, Richmond, Victoria.

\* SHARES in the ABOVE SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**IRON AND COAL SHARES — SPECIAL BUSINESS.**  
Bilbao, Cardiff and Swansea, Consett, Chillington, Ebbw Vale, Nant-y-Glo, Newport, Abercrombie, and Felsall.  
SHARES SOLD FOR FORWARD DELIVERY, ONE, TWO, OR THREE MONTHS, ON DEPOSIT OF TWENTY PER CENT.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**ELECTRIC LIGHT SHARES — SPECIAL BUSINESS.**  
Anglo-American, Maxim-Weston, Pilsen-Juel, Brush, Maxim-Weston, Swan.  
Shares sold for cash, account, or for forward delivery (one, two, or three months) on deposit of 20 per cent.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**EAST WHEAL ROSE, OLD SHEPHERDS, MOUNTS BAY, TREASAVAN, HOME MINES TRUST.**  
SPECIAL BUSINESS in the above for cash or account.  
SPECIAL SALE, for FORWARD DELIVERY, ONE, TWO, OR THREE MONTHS, on deposit of TWENTY PER CENT.—100 East Wheal Rose, 10s. 6d.; 100 Mounts Bay, 7s.; 100 Old Shepherds, 10s. 3d.; 100 Treasavan, 10s.; 100 Home Mines Trust, 11s. 3d.  
JAMES H. CROFTS, 1, FINCH LANE, LONDON.  
ESTABLISHED 1842.

**M. R. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.**  
44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description. RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS, TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS. Accounts opened for the Fortnightly Settlement.  
A List of Investments free on application.

**M. R. BUMPUS has SPECIAL BUSINESS in the undermentioned:—**  
50 Almada, 12s. 6d. 50 Emma, £2 2s. 200 Port Phillip, 3s.  
50 Bisham, £2 6s. 3d. 50 East Caradon, 15s. 100 Pen-y-Ordd, 4s.  
50 Bisham, £2 6s. 3d. 40 Frontino, 3s. 6d. 50 Prince of Wales, 2s.  
50 Bisham, £2 6s. 3d. 20 Great Holway, 4s. 25 Panulicillo, £6s.  
50 Bisham, £2 6s. 3d. 50 Hingston Down, 5s. 100 Potosi, 18s. 3d.  
50 Bisham, £2 6s. 3d. 100 Indian Consolidated, 3s. 6d. 30 Richmond, £6s.  
50 Bisham, £2 6s. 3d. 3s. 9d. 50 Ruby, 3s.  
50 Bisham, £2 6s. 3d. 100 Indian Phoenix, 3s. 9d. 25 Tolima A, £2s.  
50 Bisham, £2 6s. 3d. 50 Kohinoor B, 15s. 20 ditto B, £2s.  
50 Bisham, £2 6s. 3d. 25 Leadhills, £2s. 100 Tankerville, 4s.  
50 Bisham, £2 6s. 3d. 100 La Plata, 21s. 6d. 40 United Mexican, £5s.  
50 Bisham, £2 6s. 3d. 150 Myre Gold, 7s. 15 Van, £5s.  
50 Bisham, £2 6s. 3d. 100 Nouveau Monde, 7s. 6d. 10 Wh. Grenville, £2s.  
50 Bisham, £2 6s. 3d. 40 New Kitty, £2s. 150 Wheal Jewell, 25s.  
50 Bisham, £2 6s. 3d. 50 New Trumpet Consols 40 West Godolphin, 25s.  
50 Bisham, £2 6s. 3d. 50 Organos, £1 13s. 9d. 15 West Kitty, £13s.  
50 Bisham, £2 6s. 3d. 50 Orita, 17s. 50 West Polbrean.

Where prices are not inserted, offers may be made.  
SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.  
BUMPUS devotes special attention to these Securities, and is in a position to supply reliable information and advice to intending investors and others.

**WILLIAM HENRY BUMPUS, SWORN BROKER,**  
OFFICES: 44 THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

**BRITISH AND FOREIGN MINING OFFICES.**  
Messrs. PETER WATSON AND CO.,  
18, AUSTIN PRIORS,  
OLD BROAD STREET, LONDON, E.C.  
BANKERS: THE ALLIANCE BANK (Limited).

**Messrs. PETER WATSON AND CO.'S**  
BRITISH AND FOREIGN MONTHLY MINING NEWS  
—STOCK AND SHARE INVESTMENT NOTES—MINES,  
MINERALS, AND METAL MARKETS—SHARE LIST,  
No. 855, VOL. XVII., for JULY month, is now ready, and will be sent to customers on application.

Annual Subscription..... 5s. Single Copy..... 6d.

**M. R. ALFRED E. COOKE,**  
DEALER in BRITISH AND FOREIGN STOCKS AND SHARES  
of EVERY DESCRIPTION.  
(FROM 75, OLD BROAD STREET)  
ESTABLISHED 1853.  
9, OLD BROAD STREET, LONDON.

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Where prices are not inserted, the market price of the day will be taken, or offers may be made:—

20 Bratsberg Cop., £2 8s. 9d. 60 Langford Silver, 5s. 6d. 30 Sortridge Copper and Tin, 2s. 6d.  
21 Callao Bis Gold, 14s. 40 Mounts Bay, 7s. 10 South Darren Silver-lead, 15s.  
75 Colombian Hydraulic Gold, 6s. 50 New West Caradon Copper, 5s.  
40 Carn Camborne Tin & Copper, 3s. 30 New Caradon Copper, 5s.  
50 California Gold, 12s. 9d. 100 Nouveau Monde Gold, 7s. 9d.  
35 Drakeville Tin and Copper, 5s. 60 North Blue Hills, 2s. 6d. 30 West Caradon Copper, 12s.  
70 Devon Friend., 4s. 6d. 50 Old Shepherds, 11s. 6d. 100 West Grogwion, 10s.  
50 East Rose Lead, 10s. 6d. 10 Organos, £1 17s. 6d. 20 West Polbrean Tin, 10s.  
50 E. Blue Hills Tin, 6s. 6d. 20 Orita Gold, 16s. 9d. 100 West Grogwion, 10s.  
20 Eberhard Sil., 6s. 6d. 20 North Grogwion, 10s.  
20 Fronting Lead, 20s. 6d. 50 Prince of Wales, 2s.  
30 Grogwion Lead, 13s. 50 Potosi Gold, 15s.  
50 Home Mines Trust, 12s. 3d. 20 Port Phillip Gold, 4s.  
40 Herodfoot, 3s. 20 Richmond Silver, 6s. 50 Wheal Coates Tin, 5s.  
30 La Plata Lead, 7s. 20 Ruby, £2 13s. 50 West Crebor Copper, 4s. 9d.  
20 Leadhills, £2s. 10 Roman Gravel Lead, 7s. 9d.  
Many of the above shares can be supplied for settlement by arrangement at the middle or end of August or September on payment of 20 per cent. deposit. Shares not found in the above list may be purchased on application.  
ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

**VICTORIA GOLD (Venezuela).—VERY IMPORTANT**  
ADVISED are shortly expected. SPECIAL BUSINESS as BUYER or SELLER. SHARES dealt in for FORWARD DELIVERY on receipt of 20 per cent. deposit.

**PRICES of every description of STOCKS and SHARES are** received continuously throughout the day by TELEGRAPH from the STOCK EXCHANGE. TELEPHONE NUMBER, 1288.  
ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.  
(Opposite the Stock Exchange, with which the offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

**M. R. JAMES STOCKER, STOCKBROKER,**  
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.  
Has special business in the following for cash or settlement or arrangement:—  
Almada, 12s. Home Mines, 11s. Richmond, £2s.  
Bratsberg, 45s. Kapanga, 5s. 6d. Roman Gravel, £7s.  
Callao Bis, 12s. 6d. Kohinoor, 15s. Ruby, 32s.  
Callao Bis, 12s. 6d. La Plata, 20s. Soubach, 7s.  
Carn Camborne, 17s. Langford, 5s. Sortridge, 2s. 6d.  
Chile Gold, 14s. Leadhills, £2 10s. South Caradon, 17s.  
Colombian, 5s. Montana, 35s. Tankerville, 3s.  
Clitters, 25s. Mounts Bay, 7s. Treasavan, 10s. 6d.  
Chontales, 6s. 6d. New Emma, 6s. 6d. United Mexican, £5s.  
Colorado, £2 1s. Nouveau Monde, 7s. 3d. Victoria, 16s.  
Copiapo, £3s. 4d. Old Shepherds, 10s. 6d. West Caradon, 11s. 6d.  
Devon Friendship, 4s. 6d. Organos, 33s. 9d. West Kitty, £2s. 6d.  
Eberhard, 6s. Orita, 15s. 9d. Wheal Crebor, £2 8s.  
East Rose, 9s. 9d. Port Phillip, 2s. 9d. Wheal Crebor, £2 8s.  
Herodfoot, 3s. 3d. Prince of Wales, 2s. 6d.  
Special Business in East Rose, Old Shepherds, Treasavan, Mounts Bays, and Indian Gold Mines, and all Stocks and Shares, ordinary and miscellaneous.  
BANKERS: LONDON AND WESTMINSTER.

**M. R. J. GRANT MACLEAN,**  
SHAREBROKER AND IRONBROKER, STIRLING, N.B.  
Refers to his Share Market Report on page 333 of to-day's Journal.

**JOHN B. REYNOLDS, STOCK AND SHARE DEALER,**  
37, WALBROOK, LONDON, E.C.  
Established Twenty-five Years.

BANKERS: LONDON JOINT-STOCK.  
Mr. REYNOLDS, at considerable expense to himself, is prepared to advise as to the Purchase or Sale of Mining Shares on the receipt of a fee of 21s. His regular correspondents, however, can be advised gratuitously.  
Mr. REYNOLDS refers to his past recommendations, and lays stress on the exceptional future evidently in store for certain Mines.

**M. R. W. BAWDEN SKEWIS, MINING AGENT, STOCK AND SHARE DEALER,**  
2, ST. PETER'S ALLEY, CORNHILL, LONDON, E.C.  
A reliable Price List issued every evening at Five o'clock, which can be had free on application.  
Mines Inspected at Home and Abroad on moderate terms.  
Mr. SKEWIS having had great and practical experience in Cornish Mining is, therefore, in a position to give trustworthy information.  
Wheal Crebor, Bedford United, West Crebor, Prince of Wales, and Collacombe Consols are all promising mines. Prices low at present.

**M. R. W. MARLBOROUGH, STOCK AND SHARE DEALER**  
29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)  
Can SELL the following SHARES at prices annexed:—  
100 Almada, 12s. 6d. 30 Frontino, £1 15s. 15 Ruby, £1 11s. 3d.  
20 Bratsberg, £2s. 20 Great Holway, 4s. 15 Richmond, £2s.  
20 Bratsberg, £2s. 25 Home Mines Tr., 13s. 6d. 75 Sortridge Con., 2s. 9d.  
40 California Gold, £1. 100 Kapanga, 6s. 6d. 20 South Caradon (Ltd.), £3s. 6d.  
60 Colombian Gold, 20s. 20 Leadhills, £2 11s. 3d. 20 South Caradon (Ltd.), £3s. 6d.  
40 Corporation of South Australian Copper, 22s. 6d. 40 Langford Silver, 5s. 6d. 75 Tankerville, 3s. 6d.  
30 Callao Bis, 12s. 6d. 25 La Plata, 20s. 6d. 40 Treasavan, 10s. 6d.  
40 Chile Gold, 13s. 9d. 100 Mounts Bay, 7s. 6d. 10 Uni. Mexican, £5s.  
100 Chontales, 6s. 9d. 30 New Emma, £2. 20 Van, £5s.  
40 Colorado, £2 1s. 3d. 40 Organos Gold, 30s. 6d. 50 Victoria Gold, 16s.  
25 Devon Consols, £3s. 25 Old Shepherds, 10s. 6d. 40 West Devon, 3s.  
100 Dev. Friendship, 4s. 6d. 20 Orita, fully pd., 13s. 40 West Phoenix, 15s.  
50 East Blue Hills, 6s. 6d. 50 Port Phillip, 3s. 25 West Caradon, 11s. 3d.  
50 Eberhard, 6s. 6d. 50 Prince of Wales, 2s. 6d. 20 Wheal Crebor, £2 11s. 3d.  
20 East Caradon, 9s. 40 Potosi, 18s. 3d. 25 Western Andes Gold, £5s.  
40 East Rose, 10s. 6d. 75 Parys Cop., 3s. 6d. 25 Victoria Gold, 16s.  
VICTORIA GOLD (Venezuela).—I strongly recommend the immediate purchase of these shares for an important rise.

SELECTED, PROGRESSIVE, AND DIVIDEND-PAYING FOREIGN AND COLONIAL MINES—Circular with full particulars, and table of returns, now ready. Price 1s., free to clients.  
WESTERN ANDES profit for April, £885; TOLIMA profit for April, £1880.  
Shares in Home, Foreign, and Colonial mines, bought and sold at net market prices, free of commission.  
PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON RECEIPT OF DEPOSIT OF 20 PER CENT.  
BANKERS: ALLIANCE BANK (Limited).

**F. FERDINAND R. KIRK, STOCKBROKER,**  
5, BIRCHIN LANE, LONDON, E.C.

Fortnightly Accounts opened in all Stock Exchange Securities on receipt of the usual cover

**SPECIAL BUSINESS in the following or any part:—**

50 Alamillos, £13s. 50 East Wh. Rose, 12s. 50 Organos, £1 15s.  
80 Bratsberg, £2s. 6d. 80 East Blue Hills, 6s. 90 Orita, 17s.  
40 Birdseye, £1 6s. 40 Frongoch, 20s. 80 Old Shepherds, 9s.  
60 Canadian Cop., 16s. 6d. 60 Goginan, 13s. 200 Port Phillip, 3s. 3d.  
70 Callao Bis, 13s. 3d. 200 Home Mines Trust, 10s. 60 Prince of Wales, 12s.  
200 Consolidated, 2s. 6d. 10s. 60 South Darren, 12s. 6d.  
150 Colombian Hyd., 6s. 40 Kapanga, 6s. 6d. 50 Treasavan, 10s.  
200 Chontales, 6s. 6d. 40 Leadhills, £2s. 40 Wheal Crebor, £2 10s.  
100 Mounts Bay, 7s. 6d.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

**THE "DIFFERENTIAL" PUMPING ENGINE (DAVEY'S PATENT),**  
FOR DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION, SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL PUMPING PURPOSES.

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HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all sizes, from 5 to 500-horse power, and have facilities for supplying very powerful Engines and Pumps at a short notice.

**M. R. CHARLES THOMAS,**  
MINING AGENT, STOCK AND SHARE DEALER,  
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**M. R. ALFRED THOMAS,**  
MINING ENGINEER, AND STOCK AND SHARE DEALER,  
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Published by ALFRED THOMAS, M.E., 10, Coleman-street, London, E.C.  
"Invaluable to those who cannot attend the markets."

ESTABLISHED 1852.  
**M. R. HENRY J. TALLENTIRE:**  
(SUCCESSOR TO HENRY GOLD STREET)  
OFFICES—21, THREADNEEDLE STREET, LONDON, E.C.  
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**J. JOHN L. L. AND CO.,**  
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Containing latest information and Stock Exchange prices of all Leading Securities.  
POST FREE ON APPLICATION.  
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**GRANVILLE SHARP, STOCK AND SHARE DEALER,**  
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BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

**M. R. E. J. BARTLETT, STOCK AND SHARE DEALER,**  
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Selected List of Investments post free on application.

**CHARLES J. SIMS, STOCK AND SHARE DEALER,**  
3, UNION COURT, OLD BROAD STREET, LONDON, E.C.  
Weekly List of Prices, &c., post free, on application.  
Now ready, and post free, "Successful Home Mining."  
Now ready, post free, One Shilling.  
"How, When, and Where?" A Book on Investments.

**Messrs. ENDEAN AND CO., STOCK AND SHARE DEALERS,**  
85, GRACECHURCH STREET, LONDON, E.C.  
ESTABLISHED 1861.  
Bankers: London and Westminster, Lothbury, E.C.

**Messrs. J. TAYLOR AND CO.,**  
MINING ENGINEERS AND INSPECTORS,  
86, LONDON WALL, LONDON, E.C.  
Have Agents in the various Mining Districts of Great Britain, the Continent, Australia, and the United States of America.  
Inspections undertaken, either personally or by our Agents, and Reports of Advice as to Working given.

**M. R. W. B. COBB, 29, BISHOPSGATE STREET, LONDON, E.C.**  
IMMENSE PROFITS AND LARGE DIVIDENDS.  
Tolima, Western Andes, Colombian Gold, Organos, and Corporation of South Australian Copper highly recommended for a great rise.

**ABBOTT, PAGE, NEIL, AND CO.,**  
STOCKBROKERS,  
42, POULTRY, LONDON, E.C.  
Resumé of Stock Exchange business issued every Monday.  
JULY CIRCULAR NOW READY.  
Both sent post free on application.

**HOOKE AND CO., STOCK AND SHARE DEALERS,**  
563 and 564, MANSHION HOUSE CHAMBERS, 11, QUEEN VICTORIA STREET, E.C.  
Have SPECIAL DEALINGS in:—  
20 Bedford Unit., £1 16s. 3d. 80 Langford Copper, 6s.  
100 Devon Friendship, 4s. 6d. 15 Monu Consol., 15s.  
100 East Blue Hills, 6s. 5 New Kitty, £2 3s. 9d. 30 La Plata, 18s. 9d.  
50 Tankerville, 4s. 100 Prince of Wales, 15s. 20 Exchequer, 2s. 9d.  
100 Sortridge, 3s. 25 South Caradon, 15s. 25 West Llaburne,  
100 South Devon, 4s. 100 New Caradon, 6s. 20 Tolima "A."  
20 Gunnislake (Olliters), 50 West Crebor, 4s. 6d. 50 Nouveau Monde, 6s. 6d.  
£1 6s. 3d. 50 West Devon, 3s. 6d. 100 Port Phillip, 2s. 9d.

The MACKAY AND REVOLUTION SILVER MINING COMPANY'S Mines immediately adjoin the "Joy's Lawrence," which is turning out such a prize, paying a monthly dividend equal to the whole of the capital, or £12 a year for every £1 invested; and it has been proved beyond doubt that its mines run through the Mackay and Revolution property. For further particulars as to the Mackay and Revolution Mining Company (Limited), apply to HOOKE and Co., as above.

**HORACE J. TAYLOR, 38, GREAT ST. HELENS, LONDON, E.C., STOCK AND MINING SHARE DEALER.**  
Offers FOR SALE the undermentioned, all or part, at annexed prices:—  
100 British United, 75 Herodfoot, 3s. 9d. 100 Sortridge, 2s. 6d.  
20 Colorado, £2 2s. 6d. 50 Langford, 6s. 6d. 100 Southwark and Dept.  
100 Californian Gold, 18s. 9d. 50 La Plata, £1. 100 Trafalgar, 4s. 6d.  
50 Callao Bis, 13s. 6d. 100 Monu Consols. 40 S. Devon Unit., 4s. 6d.  
125 Colombian Gold, 5s. 6d. 50 Mounts Bay, 7s. 3d. 50 Treasavan, 10s. 6d.  
100 Chontales, 6s. 9d. 30 N. W. Caradon, 3s. 10 Tankerville, 3s. 6d.  
100 Devon Friend., 4s. 6d. 75 Nouveau Monde, 7s. 9d. 10 Tolima A.  
50 East Blue Hills, 6s. 3d. 50 Old Shepherds, 10s. 20 Uni. B.  
50 East Rose, 10s. 6d. 20 Potosi, 18s. 3d. 25 Victoria (Gold), 17s.  
10 Eberhard, 6s. 6d. 100 Parys Copper, 3s. 6d. 100 West Llaburne, 2s. 9d.  
25 Emma, £2. 20 Potosi, 18s. 3d. 100 West Devon Con., 3s.  
100 Flagstaff, 3s. 6d. 100 Prince of Wales, 15s. 6d. 100 West Crebor, £2 10s.  
50 Home Mines Trust, 10s. 6d. 50 Port Phillip, 3s. 50 Wheal Crebor, £2 10s.  
12s. 50 Ruby, £1 11s. 3d. 50 Uni. divd.

BANKERS: CENTRAL BANK OF LONDON (LIMITED).

ESTABLISHED 1825.

**EDWIN LEWIS AND SONS,**

Patent Tube Works, MONMORE GREEN and Britannia Boiler Tube Works, ETTINGSHALL,

**WOLVERHAMPTON.**

MANUFACTURERS OF

Lapwelded &amp; Buttwelded Wrought-iron, Steel, or Homogeneous Tubes

FOR EVERY

**COLLIERY OR MINING PURPOSE.****COLLIERY VENTILATING TUBES.****WILLIAM THOMPSON,**

MANUFACTURER OF

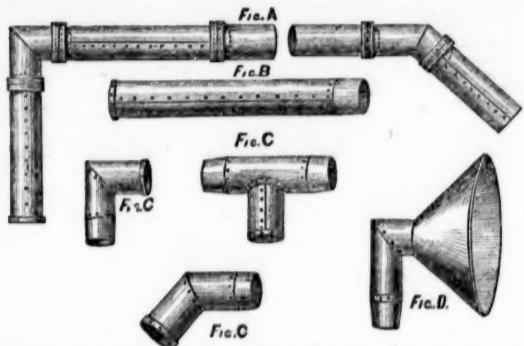
**COLLIERY VENTILATION TUBES.**

Fig. A.—Shows the tubes adapted for any variation in direction.

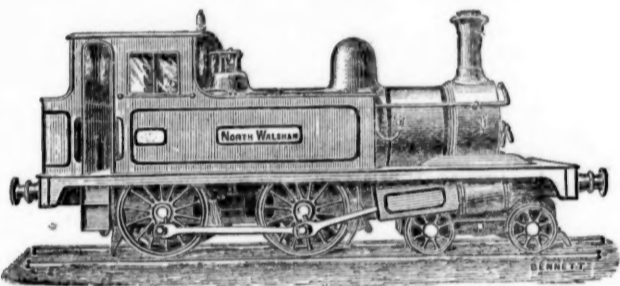
Fig. B.—Straight length of tube.

Fig. C.—Different angle bends.

Fig. D.—Is a hopper to receive air at top of shaft.

**Wrought-iron Buckets.****Baskets, Kegs, Pit Tubs,****Ash Barrow Bodies,****Ventilating Tubes for****Collieries, Tanks,****Kibbles for Copper****Mines, &c. General****Sheet Iron Worker.****Highfield Works, Ettingshall, near WOLVERHAMPTON.**

ESTABLISHED 1860.

**HUDSWELL, CLARKE, AND CO.,****LEEDS.****LOCOMOTIVE****TANK ENGINES**

OF ALL SIZES AND ANY GAUGE OF RAILWAY.

OF GREATLY IMPROVED CONSTRUCTION

FOR MAIN OR BRANCH RAILWAYS.

CONTRACTORS, IRONWORKS, COLLIERIES.

For Cash or Deferred Payments.

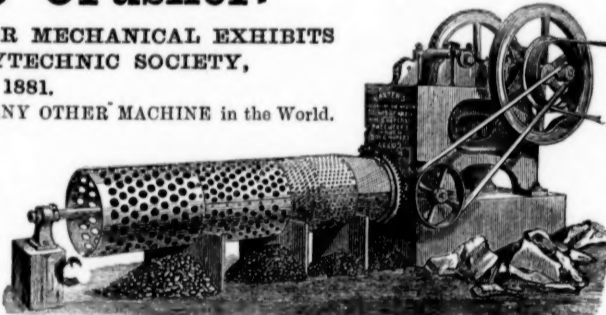
**SOLE MAKERS OF RODGERS' PATENT WROUGHT IRON PULLEYS.****The Only Knapping Motion Stone Breaker and Ore Crusher.**AWARDED THE ONLY SILVER MEDAL FOR MECHANICAL EXHIBITS  
AT THE ROYAL CORNWALL POLYTECHNIC SOCIETY,  
FALMOUTH, SEPT., 1881.

GUARANTEED to do MORE WORK with less power THAN ANY OTHER MACHINE in the World.

NOTE THIS FACT.

To Mr. Baxter, Leeds. *Cinderford, Feb. 13, 1883.*  
DEAR SIR,—I am pleased to be able to tell you that the Machine works splendidly. We are breaking 16 trucks a day now and we thought it a good day's work to do 10 a day with the old Machine, so you can see the difference. I had a gentleman looking at it yesterday, and he was surprised to see it work so easily.  
Yours truly, E. ORGAN.

The above refers to one of our 16 by 9 Machines we supplied to replace an "Improved Blake" 15 by 9 Machine.



GUARANTEED NO INFRINGEMENT OF ANY OTHER PATENT

AWARDED THE ROYAL MANCHESTER, LIVERPOOL, AND NORTH  
LANCASHIRE AGRICULTURAL SOCIETY'S SILVER MEDAL,  
8TH OF SEPTEMBER, 1882.

FOR ILLUSTRATED CATALOGUE AND FULL PARTICULARS ADDRESS TO THE PATENTEES AND SOLE MAKERS,

**W. H. BAXTER & CO., ALBION STREET, LEEDS,**

Will EXHIBIT at the ENGINEERING EXHIBITION at the AGRICULTURAL HALL, LONDON, in JULY, 1883.

**THOMAS TURTON AND SONS,**

MANUFACTURERS OF

**MINING STEEL of every description.****CAST STEEL FOR TOOLS. CHISEL. SHEAR. BLISTER, & SPRING STEEL****MINING TOOLS & FILES of superior quality.**EDGE TOOLS, HAMMERS, PICKS, and all kinds of TOOLS for RAILWAYS, ENGINEERS, CONTRACTORS, and PLATELAYERS  
LOCOMOTIVE ENGINE, RAILWAY CARRIAGE and WAGON SPRINGS and BUFFERS.**SHEAF WORKS & SPRING WORKS, SHEFFIELD.**

LONDON OFFICES—90, CANNON STREET, E.C.

PARIS DEPOT—12, RUE DES ARCHIVES.

BOSTON, MASS., U.S.—40, KILBY STREET.

**Registration of New Companies.**

The following joint-stock companies have been duly registered:—

**THE SOUTH DEVON HYDRO-SANITARIUM AND HOTEL COMPANY (Limited).**—Capital 60,000*l.*, in shares of 5*l.* To erect, establish, and maintain such buildings at and near Tynemouth, Devon. The subscribers (who take one share each) are—H. N. Hart, 10, Cornhill; G. L. Grizsa, 20, Grafton-street; C. F. A. Voisey, Broadway Chambers; E. H. Stanley, 10, Cornhill; T. Charlton, 18, Brook-street; H. L. Schmitz, 16, Charles-street; T. L. Fox, 1, Crown-court.

**JACKSON AND GRAHAM (Limited).**—Capital 160,000*l.*, in shares of 10*l.* To acquire wholly or in part the business of cabinet makers, upholsterers, decorators, &c., as formerly carried on by Jackson and Graham in Oxford-street, W. The subscribers (who take one share each) are—A. Manero, 34, Old Broad-street; W. E. Graham, 47, Elgin Crescent; T. H. Biddle, 68, Finchley New-road; G. J. Davis, 92, New Kent-road; J. J. Cornell, Leytonstone; C. Champ, Highbury; E. J. Bowring, Hulme.

**THE BEDFORD TOWN AND COUNTY CLUB-HOUSE COMPANY (Limited).**—Capital 50,000*l.*, in shares of 10*l.* To provide a club-house and other conveniences for members. The subscribers (who take one share each) are—T. Barnard, Bedford; G. Jones, Bury; K. W. Pearce, Rye Close; F. S. Wigram, Elstow; W. Halliday, Bedford; E. R. Green, Bedford; W. Small, Bedford.

**THE NATIONAL BICYCLE AND TRICYCLE MANUFACTURING COMPANY, COVENTRY (Limited).**—Capital 50,000*l.*, in shares of 2*l.* To purchase and continue a business established at Coventry. The subscribers (who take one share each) are—F. Schofield, 29, Haverstock-street; C. G. Grayland, 54, Belmont-street; G. O. Hodson, 33, Marylebone-road; J. H. Symonds, 23, Great Coram-street; F. W. Lowe, 72, Mildmay Grove; H. H. Suckling, 5, Metropolitan Chambers; P. Bradfield, General Post Office.

**THE PATENT DIAGONAL ROCKING FIRE-BAR COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.* To purchase, hire, let, and sell fire-bars, in connection with certain acquired patents. The subscribers (who take one share each) are—E. de Ruten, 16, Newland-street; C. A. Angus, 69, Holland-road; G. Shenton, 5, Belsize Crescent; F. Bracher, 116, London Wall; R. Sanford, 6, Wharton-terrace; W. T. Billington, 310, Fulham-road; J. J. Ball, Isledon-road.

**CHURCH SCHOOLS COMPANY (Limited).**—Capital 100,000*l.*, in shares of 5*l.* To provide and maintain in England and Wales schools, in conjunction with religious instruction as taught by the Church of England. The subscribers are—W. H. Smith, 3, Grosvenor-place; J. G. Hubbard, 24, Prince's Gate, 200; R. Gregory, 2, Amen-court, 20; W. R. Farquhar, 16, St. James's-street, 200; F. S. Powell, 1, Cambridge-square, 200; C. Barney, Kingston-on-Thames, 20; E. Bayley, St. John's Vicarage, 10; W. Emery, Ely, 20; R. E. Billing, Spitalfields Rectory, 5.

**HARVEY AND COMPANY.**—Capital 300,000*l.*, in shares of 250*l.* To acquire and continue a general engineering and engine manufacturing business, conducted by a firm bearing the same name. The subscribers are—W. Harvey, Torquay, 34; W. West, Hayle, 40; N. T. West, Hayle, 142; W. J. Rawlings, Hayle, 42; F. Harvey, Hayle, 292; H. N. Harvey, 186, Gresham House, 32; N. Harvey, Penzance, 16.

**THE INVESTMENT PUBLISHING COMPANY (Limited).**—Capital 5000*l.*, in shares of 10*l.* To acquire "The Financial and Mining News," and conduct the business of publishers, printers, lithographers and advertising agents, &c. The subscribers (who take one share each) are—J. Head, 9, Seymour-street; C. A. Lane, 32, Keppel-street; E. C. Marks, 30, Dorset-square; T. P. Ochittin, Westminster Palace Hotel; J. P. Prince, Brixton Rise; T. Percy, 17, Cecil-street; E. R. White, 18, Hatherley Grove.

**"ASHORE AND AFLOAT" PUBLISHING COMPANY (Limited).**—Capital 20,000*l.*, in shares of 10*l.* To acquire, print, and publish the weekly paper called "Ashore or Afloat." The subscribers (who take one share each) are—H. H. Leverell, 16, St. Martin's-court; W. J. Innes, 219, South Lambeth-road; H. Horn, 11, Camden Gardens; J. T. Carrington, Royal Aquarium; G. Sumner, Hampstead; J. Wheelde, 64, Peckham-grove; H. W. Howse, Streatham; A. Page, 56, Queen Anne-street.

**THE WASHINGTON HILL GOLD GRAVEL MINES (Limited).**—Capital 100,000*l.*, in shares of 1*l.* To adopt and carry into effect an agreement made between J. H. Thomas, of the one part, and W. Beckett, as trustee for the company, of the other. To acquire by purchase or otherwise, developments, open, explore, and work any lands and mines, placers, drifts, lodes, veins, and seams of ore, and mineral deposits in Plumas and Sierra Counties, California, or elsewhere in the United States of America. The subscribers (who take one share each) are—N. Greene, Bartholomew House, merchant; R. Levick, Bartholomew House, merchant; C. A. McBean, Camberwell, gentleman; R. W. Wilson, 30A, Moorgate-street, agent; J. Milne, 37, Walbrook, merchant; P. Pritchard, Palmerston-buildings, merchant; A. Sweeney, 45, Reaston-road, gentleman. The subscribers will appoint the members of the first board; future directors will have to qualify in 300 shares each.

**THE BROCKMOOR IRON AND TIN-PLATE WORKS (Limited).**—Capital 50,000*l.*, in shares of 10*l.* The business of an ironmaster, miner, smelter, and manufacturer of sheet-iron, steel plates, &c. The subscribers (who take one share each) are—E. Budd, Letherhead; E. F. Bunce, 4, Abchurch-yard; H. S. Budd, Lincoln's Inn; F. Lopes, 14, George-street; L. E. Rickards, 2, Crown-court; J. E. Budd, Letherhead; F. L. Budd, Letherhead.

**THE NORTHERN OF EUROPE RAILWAY COMPANY (Limited).**—Capital 600,000*l.*, in shares of 5*l.* To acquire concessions and rights for the construction and working of railways in Norway and Sweden, from Lulea to the Ofoten Fiord on the Atlantic Ocean. The subscribers (who take one share each) are—J. G. Wilkinson, 50, Addison-road; E. Fowles, Edgbaston; J. T. Jarvis, 20, Ladbroke-square; W. M. Wilkinson, 44, Lincoln's Inn-fields; A. Longdon, Denmark Hill; S. G. Williams, Malvern; A. W. Sharp, 5, Great Winchester-street.

**BLUMBERG AND COMPANY (Limited).**—Capital 200,000*l.*, in shares of 10*l.* To acquire and carry on the business of foreign warehousemen, manufacturers, merchants, and importers of fancy goods, &c. The subscribers (who take one share each) are—J. C. Wakefield, 25, Holland Villas-road; V. L. A. Blumberg, 2, Cannon-street; C. N. Blumberg, 2, Cannon-street; J. Heather, 17, Paternoster-row; C. Hoar, 2, Cannon-street; R. Spence, 5, Love-lane; F. T. Isitt, 5, Friday-street.

**SAMUEL BAXTER AND SONS (Limited).**—Capital 10,000*l.*, in shares of 1*l.* To acquire and carry on at Paternoster-row a business of publishers, booksellers, printers, &c. The subscribers (who take one share each) are—R. Baxter, 15, Paternoster-row; F. T. Hall, Esher; C. Burghin, 3, Ashmount-road; E. L. Baxter, Crouch End; W. H. Phillips, 24, Carlton-terrace; W. J. Crutch, 85, Petherton-road; A. Desange, 13, Thomas-street.

**THE FLOATING ELEVATOR COMPANY (Limited).**—Capital 25,000*l.*, in shares of 10*l.* The purchasing and working of a patented method of elevating grain, &c., of which William Southern Brice is the patentee. The subscribers (who take one share each) are—R. Bennett, Liverpool; W. D. Mack, Liverpool; W. J. Mullins, Liverpool; E. R. Peel, Birkenhead; C. Archer, Bootle; H. Wilding, Garston; S. Williamson, Liverpool.

**MILLER'S FOOD PRESERVING COMPANY (Limited).**—Capital 12,000*l.*, in shares of 2*l.* To make, preserve, and sell consolidated and other soups and preparations of meat, &c. The subscribers are—C. Mumby, Gosport, 25; J. W. M. Miller, Southsea, 25; W. H. Fry, Gosport, 25; W. Garnet, Hambledon, 25; T. H. Seture, Southsea, 1; H. Parris, Southsea, 1; J. Woodward, Langport, 25.

**THE ICELAND TRADING AND NAVIGATION COMPANY (Limited).**—Capital 50,000*l.*, in shares of 10*l.* A general mercantile and ship owner's business in all branches. The subscribers (who take one share each) are—E. Carr, 5, Grocers' Hall-court; T. G. Paterson, Edinburgh; A. Menzies, Edinburgh; J. Thomson, Edinburgh; T. Carr, 20, Lawrence-lane; T. Chitty, 5, Lawrence-lane; C. E. Paterson, Edinburgh.

**THE CROOKBOTTOM MANUFACTURING COMPANY (Limited).**—Capital 30,000*l.*, in shares of 5*l.* To carry on at Stalybridge

ited).  
idge

to wait for months. What we have to do is to stick to our property, and at the present price I hope the shareholders will do so, for I believe that before long they will find that it will have largely increased in value. (Cheers.)

The CHAIRMAN: Gentlemen, there is no doubt that what Mr. Heiron says is very true. We had this Albion property pressed upon us very much; not from one source, but from several. The price which was pressed upon myself individually was 120,000*l.*; but they were good enough to say that they did not want the cash, they would be content to take Richmond shares. (Laughter.) Well, as Richmond shares at that time were at about 10*l.* I did not see my way to come and advise you to give about a quarter of a million sterling for a mine which we are led to believe belongs to us anyhow. (Cheers.) It having been pressed upon us in so many directions—some through myself and some through my friend Mr. Broughton—it occurred to me that there must be some reason for their pressing it so upon us, and the result has shown that they had very good reason indeed. We adopt the policy laid down by Mr. Heiron. When a reasonably promising property offers at a moderate price then we buy it (hear, hear)—but at very different figures to that at which the Albion was offered to us. But I wish to say this—that whilst we are picking up these little properties here and there around us, I do not want our shareholders to run away with the idea that we think the Richmond Mine is worked out—(cheers)—because we believe nothing of the sort. (Cheers.) We only think it is a discreet and a good policy to purchase these little outside properties as they offer. There are several which I could name, and which, perhaps, other gentlemen could name; but we do not want to purchase a lot of properties which will be of no use to us. (Hear, hear.) We have a magnificent establishment both for smelting purposes and for refining purposes, and if we cannot get sufficient ore out of the Richmond Mine proper we must look for it from other mines in the district. (Cheers.) There are plenty of other mines; some of them, no doubt, good; but it requires great care and caution in purchasing any new properties. (Hear, hear.)

The resolution for the adoption of the report and accounts was then put and carried unanimously.

The CHAIRMAN: The next business on the agenda, gentlemen, is to re-elect a director my friend Mr. Broughton. Now, you have known Mr. Broughton yourself—I was going to say as long as I have known him, but that is not quite so—but you have known him as long as you have known me, at all events. (Cheers.) Mr. Broughton is a thorough man of business; he looks after your interests, and I will tell you a secret now which he would not like to tell you himself, that from first to last—and Mr. Broughton has been with us for ten years—I believe, from the date he entered the company to the present moment, he has never sold a single share. Is that so, Mr. Broughton?—Mr. BROUGHTON: That is so.

The CHAIRMAN: That will show you what confidence he has in the concern. (Hear, hear.) I am not going to trespass upon you again, because I am quite sure you will re-elect Mr. Broughton with acclamation. All I have to do is to propose his re-election, which I do with very much pleasure. Will any gentleman second that?—Mr. HEIRON: I have great pleasure in seconding that.—The motion was put and carried.

Mr. BROUGHTON: Gentlemen, my view of a director's duties and his position is that he stands in the position of a trustee for the whole body of shareholders. (Hear, hear.) Now, I have no doubt that if I had felt disposed to give way to temptation I could have made many, many thousands of pounds from the information which I have had the opportunity of obtaining; but I have always looked upon it, as I say, that a director stands in the position of a trustee, and that it is not only dishonourable but dishonest for a director to speculate in shares—that is the feeling by which I have always been animated in this respect. Well, now, I have to thank the Chairman and also Mr. Heiron for their complimentary remarks in regard to me, and I have to thank you, gentlemen, for your renewed mark of confidence in re-electing me a member of the board; and I can only say, further, that in the future, as in the past, if I can do anything to promote the interests of the company it will always be my endeavour to do so. (Cheers.)

The CHAIRMAN: The next duty I have, gentlemen, is to propose the re-election of Mr. Schultz as a director. As I explained before, Mr. Schultz was obliged to go to Germany. He had his visit to suit me until he could not put it off any longer. Gentlemen, I have much pleasure in proposing that Mr. Schultz be re-elected a director.—Mr. BROUGHTON: I have great pleasure in seconding the re-election of Mr. Schultz.—The proposition was carried.

The CHAIRMAN: In Mr. Schultz's absence I beg to thank you on his behalf for re-electing him. The next business, gentlemen, is the re-election of the auditors. That matter rests entirely with the shareholders. Perhaps someone will kindly propose their re-election?

Mr. HEIRON: Who are they? I suppose we shall find them at the bottom of the sheet.—The CHAIRMAN: Mr. James Fraser and Mr. George Broom. They have been our auditors for a good many years, and they look pretty sharply after the interests of the company. If we were to let them have their own way I do not know that they would let us have any dividend at all. They look after posterity so much. (Laughter.)

Mr. HEIRON: If that were so I would not propose their re-election; but I think they have too much common sense to deprive us of our dividend. I beg to propose their re-election.—Mr. JOHN ELLIOT: I second that.

The names of the auditors were submitted separately, and they were each re-elected.

The CHAIRMAN: That, gentlemen, concludes the business of the meeting, and I am very much obliged to you for attending to-day.

Mr. BROUGHTON: I have very great pleasure in proposing a vote of thanks to our Chairman for the admirable way in which he has conducted the business to-day, and to the directors for the very satisfactory manner in which our affairs have been conducted.

Mr. HART: I have much pleasure in seconding the proposition; and, as the question of dividend is very important to us, I take it from what the Chairman has said that we are paying a large amount out of revenue for dead work, and that we are making considerable profits besides, and I take it that in the course of the next month or so we may expect the dividend of 5*s.* per share which has been paid for some time.

The motion was carried with acclamation.

The CHAIRMAN: Gentlemen, I am very much obliged to you, and I must assume that you include in the vote of thanks the rest of the directors. ("Certainly.") I will now propose that the thanks of this meeting be given to Mr. Probert for the skill and energy which he has displayed in the management of this company's property during the last six months. (Cheers.) The time of "exploration" is a very anxious period for him. It is disappointing to him, after he has laid out his particular plans for certain drifts in one direction, and rises in another direction, not to meet with the ore bodies. Still he writes in the most satisfactory terms. He says we must push on—we must not leave any part of the mine unexplored—and you may depend upon it that so long as we have him there your future and present will be looked after, and that if there are ore bodies in the Richmond ground sooner or later he will find them. (Hear, hear.) I think we owe it to him to give him most cordial vote of thanks for his attention to the affairs of the company. (Cheers.)

Mr. ELLIOT: I beg to second that, and I think at no time is it so pressing that a vote of that kind should be passed as in a time of difficulty, when the energies of those who have the interests of the company at heart are called for more than ever. (Cheers.) I think there is an especial reason why Mr. Probert should be thanked, and that is that the Richmond Mine has been kept up greatly during this time of depression through the establishment of the refining works, for which Mr. Probert was so much assailed some time back. Those refining works have been the salvation of the company, and they will bring you in considerable business even if the Richmond ore should fail. I know when Mr. Probert first brought the project to my notice I was so convinced with the arguments he adduced that I supported him strenuously, and it is a great satisfaction to me to see the success they have met with. I am quite sure we shall all fully rely upon Mr. Probert's redoubled energies to bring the company to the success he so earnestly desires for it, and I am sure he will feel pleased specially now, and I have great pleasure in seconding it. (Cheers.)

Mr. HEIRON: You include the officers in that I suppose?—The CHAIRMAN: Yes please.—The meeting then closed.

#### WHEEL CREBOR MINE.

The four-monthly meeting of shareholders was held at the offices of the company, Gracechurch-street, on Tuesday.

Mr. J. Y. WATSON in the chair.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting. The CHAIRMAN said: The accounts to be presented to you to-day show sales of copper ore for four months (812 tons), 3213*l.* 13*s.* 10*d.*; mundic, 237*l.* 12*s.* 10*d.*; interests and discounts, 18*l.* 18*s.*; against this we have this time to charge five months' costs—viz., labour, 1877*l.* 14*s.*; merchants, 428*l.* 8*s.* 3*d.*; land and water rent, 54*l.* 0*s.* 2*d.*; lords and quay dues, 239*l.* 5*s.* 4*d.*; new shaft account, 260*l.* 3*s.* 4*d.*; total, 2967*l.* 11*s.* 6*d.*, thus showing a profit, including payment of 13th month of 502*l.* 11*s.* 5*d.*. If we take four months' costs against four months' returns the profit is 1034*l.* 2*s.* 1*d.*. You are aware that we have been putting by 50*l.* a month towards this 13th month, and that at the last meeting we had 400*l.* to the credit of it, and applying this in the accounts against the 13th month, which was 511*l.*, we again, at the last meeting we carried over an undivided profit of 477*l.* 6*s.* 11*d.*, now profit of 922*l.* 11*s.* 5*d.*, and now commence by putting by 50*l.* a month which added to the present profit of 922*l.* 11*s.* 5*d.* makes 1372*l.* 11*s.* 5*d.* to divide. The balance in hand is 1228*l.* 1*s.* 9*d.*, with ore bills to be received shortly for 1508*l.* 19*s.* 5*d.*; making assets over liabilities of 2880*l.* 2*s.*. There is not a single liability on the mine beyond the lords' dues on last sales and the current monthly cost; and the share ledger has been audited by Mr. Ashmead, the chartered accountant, and certified to be strictly correct. At our meeting four months ago it was generally deplored that no discoveries had been made in the bottom level of the mine, and that, consequently, we were working away our reserves, but soon afterwards ore was found in the 132*l.* and have continued about 10 fms.; 7 fms. worth 10 tons, and is now worth 35*l.* per fm. This is the richest ore yet found in the mine, and what is also most important is richest in the bottom of the level, arguing well for the next level, towards which the shaft is now down 144 fms., but nearly 30 fms. may possibly have to be driven to reach the ore ground, and this will occupy some months in the ordinary way of driving. The question therefore, as the pursuer thinks, for the shareholders to consider is whether they will be content with a dividend of 2*s.* per share, and erect boring-machinery at a cost of not less than 500*l.* or 1000*l.*. This, when at work, would do the distance in about half the time that it would take under the ordinary way, but, at the same time, we must also consider that it might take a month or two to provide and erect a water-wheel to get the borers to work, and a good distance towards the ore may then have been driven without borers. There is another reason why we think the borer question should be deferred. The 48*l.* east is near the boundary, and we must apply for a lease of the eastern ground, and the shareholders may have no lease for the whole mine, and thus relieve me of a great personal responsibility as sole lessee. In conclusion, the Chairman formally moved the adoption of the report and accounts.

A short discussion in ensued, the chief point of discussion being whether the dividend should be 2*s.* 6*d.*, as suggested by the committee, or 3*s.* as two or three of the shareholders thought it should be.

The CHAIRMAN, Mr. SCHOFIELD, Mr. ALFRED THOMAS, and the great majority

considered that the prudent course would be to pay 2*s.* 6*d.*, whilst Mr. CLIFT and Mr. ZALMANSON considered the dividend should be 3*s.*

A letter was read from Mr. Moses Bawden, the agent, recommending the use of a rock-drill, and the CHAIRMAN pointed out that it was inadvisable to divide every penny, when an outlay might be required to carry out that recommendation.

Mr. PARRY then read the agent's report. July 14.—In submitting to you our report for the general meeting to be held on July 17 we beg to state that since the last meeting the new engine-shaft has been sunk 9 fms. 3 ft., making 13 fms. 5 ft. below the 132; the shaftmen are now engaged in cutting flat, after which skip-road and post-house will be put in preparatory to driving the levels east and west at the 144 to get under the ore ground driven through in the 132 east and west of the shaft; every available effort will be put forth on our parts to open out these two points with all possible dispatch. In the 132 we have two men driving west of the shaft to get back under the ore ground driven through in the 120; the lode at this point is unproductive. We are driving the 132 east of shaft, by six men, and are pleased to say that the last 7 fms. of this drive have yielded ore to the value of 45*l.* per fathom. The lode in the end contains a portion of mundic and spar, which has reduced its value to 35*l.* per fathom. In the 108 we have two men driving east of shaft; the lode is unproductive, and has been so for some time; nevertheless, we should not be discouraged, but push forward into the hill towards Crowdale. Its being poor, as referred to, is a true characteristic of the Crebor lode, for we find after driving a considerable distance in poorer ground copper ore has been met with in different parts of the mine.

The 103 cross-cut driving north to intersect the Bridge lode has been extended 85 fms. Since the last meeting we have intersected a small branch containing arsenical mundic and copper ore; this has been referred to in our reports. The strata is impregnated with spar more than it has hitherto been. At the 72 we have four men driving east to get under the ore ground driven through in the 48, where the lode was valued 20*l.* per fathom. We are very anxious indeed to reach this point; judging from the lode driven through in the 48, and the present strata in the 72 we see no reason to doubt why a good lode should not be met with. We have recently cut water in this end which has drained the 48, showing the lode to be porous throughout. We are forcing on the 48 by four men by the side of the lode to open out the ground more expeditiously, as we consider this to be a very important point in the future of Crebor. We have driven on this part 35 fms. In the former part of this drive the lode has varied from 10*l.* to 20*l.* per fathom. Since then it has fallen off in value, but of a very materially appearance, containing capel, arsenical mundic, spotted with copper ore. Therefore, we purpose to continue this course, and cut through the lode when thought advisable. The different points of operation continue to yield in the aggregate 33 tons of copper ore per fathom.—H. PHILLIPS, P. D. HOLMAN.

Mr. SCHOFIELD seconded the motion for the adoption of the accounts and the agent's report, which was put and carried.

The CHAIRMAN moved that a dividend of 2*s.* 6*d.* per share be declared, which was seconded by Mr. SCHOFIELD.

Mr. CLIFT moved, and Mr. ZALMANSON seconded the declaration of a dividend of 3*s.* per share.

On a show of hands the dividend of 2*s.* 6*d.* was carried almost unanimously, the larger dividend being only supported by the mover and seconder.

Mr. SCHOFIELD moved that an application be made to the Duke of Bedford for a lease of the eastern mine.—Mr. A. THOMAS seconded the motion, which was carried.

The CHAIRMAN said that before long they might obtain a new lease of the whole property, and relieve himself of the personal responsibility of the present lease and the trusteeship of the mine.

Mr. SCHOFIELD pointed out several of the points in the mine which it was considered desirable to prosecute, after which the proceedings closed with a vote of thanks to the Chairman.

#### PRINCE OF WALES MINE.

The ordinary general meeting of shareholders was held at the offices of the company, Gracechurch Buildings, Gracechurch-street, yesterday. Mr. J. Y. WATSON, F.G.S., in the chair.

Mr. C. B. PARRY (the secretary) read the notice convening the meeting and the minutes of the preceding meeting, which were confirmed. The accounts from March 31 to July 19 showed a balance of liabilities over assets amounting to 1135*l.*

Capt. S. ROBERTS (July 18) after reporting on the various points of operation, said:—

We have repaired the crusher by putting in new rolls, spindles, and sundry other repairs; put in new stamps, the axle only excepted; put in new stamps baffle, and gear to work the same, complete; the whole of which are now in excellent working order. The cost of materials of all this work has been already charged. We have also nearly completed a new footway in the new engine-shaft to the 40 fm. level. In conclusion, our prospects at present are very encouraging indeed, much more so than at any previous occasion, and should they continue we shall be in a position to considerably increase returns after the present month.

The CHAIRMAN said: Although our returns do not come up to what we were led to expect at the last meeting, and our accounts, so far as figures are concerned, are not much more satisfactory than they were then, what we consider a great discovery has been made at the mine, and if our present expectations are realised we may shortly have one of the best in Cornwall. For it is now proved beyond almost the possibility of a doubt that we have cut the Prince of Wales main lode, both at the 77 and 90 fathom levels, and that the lode worked upon by the old company at the east, and continued by the present has been a branch or south lode, cutting the main lode about 25 fathoms from the shaft. You will remember some months ago attention was called to the great inflow of water from the 77 west, when it reached the cross-course; the agent reported that the water coated everything with copper, and some very rich stones of ore were also washed out. This led the agent to drive a cross-cut on the cross-course north, and after a time he cut a large lode, but could not work it, owing to so much water. He then commenced driving a cross-cut north on the same cross-course at the 90, here a fine lode has been met with 6 ft. wide, precisely under the spots where cut in the 77, and the agent is now positive that this is the main lode of Prince of Wales, which formerly gave the dividends, and that these levels, as well as those above, were driven on a branch or south lode, which diverged from the main lode, 25 fathoms from the shaft. A cross-cut will now be put out at the 55 to cut the same lode, as it was very rich above that level to a great many fathoms east. The accounts now presented show—Copper sales, 339*l.* 2*s.* 10*d.*; tin sales, 395*l.* 14*s.* 8*d.*; the four months' costs have been 1915*l.* 10*s.* 10*d.*; liabilities over assets, 1135*l.* 1*s.* 2*d.*. The sale of ore yesterday, 48 tons, realised over 4*l.* per ton, and the agent has for sale 3 tons of copper precipitate of 41 per cent. produce, which might bring nearly 25*l.* per ton. The plan shows that the lode has diverged very much. The Duchy agent has been there, and he says that, notwithstanding the discovery, the mine is 50 per cent. better than it was at the last meeting, and he is of the same opinion as Capt. Roberts.

Mr. WAGSTAFF: What is the width of the lode?—The CHAIRMAN: So far as we have seen it is 6 ft. wide; but they are not through it yet. Capt. Roberts, in a letter to Mr. PARRY a few days ago, says—"Ever since I have known the mine I have had a very strong idea that the Prince of Wales lode is not seen in the western levels anywhere, and since we have cut this lode in the 90 I am fully convinced of the fact." I showed it to Capt. Seacombe, Mr. Walters, and Capt. Richards, and they concur in the same opinion. To me the 90 is an absolute proof. I have sent to the office a rough sketch to give you an idea of how all the levels are driven away on the south lode, and left the Prince of Wales lode untouched except in the 77 and 90 cross-cuts, as shown in the sketch. It is very probable there may be a rich mine now standing a little north all through the western part of the mine. It is a rare speculation at any rate. The Chairman added that by some people he might be thought to sanguine with regard to the future of the mine; but he had supported his opinion by paying nearly 500*l.* a-year in sinking the shaft, and he hoped to be able to show, before long, that he would have the pleasure of seeing dividends paid for many years to come.

Mr. BROWN: Has the mine been inspected by any other agent than our own?

Mr. PARRY: It has been inspected by the Duchy agent and Capt. Seacombe lately for shareholders, and they were very pleased with all they saw.

Mr. MACMILLAN moved the adoption of the accounts and the agent's report, and said it was a subject for congratulation that they seemed to have a very reasonable prospect of realising some profit from the venture. He considered the report exceedingly gratifying.—Mr. BRITAIN seconded the motion which was carried.

On the motion of Mr. WAGSTAFF, seconded by Mr. BROWN, a call of 2*s.* 6*d.* per share was made.

It was also decided to give notice to the shareholders in arrears of calls that their shares would be forfeited if the arrears were not paid on or before the 8th of next month.

A vote of thanks was passed to the Chairman, and the meeting then closed.

#### CARDIFF AND SWANSEA SMOKELESS STEAM COAL COMPANY.

The ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday, July 11.

Major P. P. MOSELEY in the chair.

The following is from the directors' report:—

Pentre and Church: This colliery during the past year has been kept regularly going, but a few days' work having been lost, and the output has been a little in excess of the previous year. The plant and machinery are in a good state of repair.—Resolved: That the directors be and they are authorised to be not been increased over that of the previous year, in consequence of slackness of trade in the early part of this year, but the directors are pleased to find that the output is now being gradually increased.—Generally: The directors have much pleasure in stating that a considerable improvement has taken place in the coal trade during the latter half of the company's financial year, which enables them to show a better balance-sheet than that of many years past, and had it been possible to include in the present balance-sheet the benefits which the company will derive from the arrangement with vendors, it would have shown far better results. The Court of Chancery having confirmed the resolutions unanimously passed by the shareholders, the law proceedings between the company and the vendors are now terminated; and the coal trade being in a more satisfactory condition than it has been for many years past, the directors feel justified in looking forward to a prosperous future for the company.

The CHAIRMAN, in moving the adoption of the report and accounts, said that for the first time in nine years the company's operations showed a profit—the amount being about 3000*l.* The position generally was more favourable, and the law proceedings against the vendors having been settled amicably he thought the prospects very encouraging, especially considering the improvement which had taken place in the coal trade. The expenditure had been reduced to the lowest possible point.

Mr. H. WHITE seconded the motion, which was agreed to after a short discussion.

The retiring directors and auditors were re-elected, and the usual compliments were passed.

#### SILVER PEAK MINING COMPANY.

The report of the directors prepared for presentation at the meeting on Tuesday next states that the mode in which Messrs. Rickard suggest that the mines should be worked differs from that recommended by Mr. Taylor only in that Messrs. Rickard advise the sinking of shafts to the tunnel from the outcrop of the lodes on the mountain, while Mr. Taylor states that it would be impossible to carry on a work of this kind for more than three to four months in the year; that the same result could be obtained at less cost and more expeditiously by drifts and raising on the lodes from the tunnel to the surface, and that on his plan the work could be carried on throughout the year. It will be for the shareholders to consider which of the two methods of working is the more advantageous. In the opinion of the majority of the American shareholders and of the board, it would not be practicable to work the mine economically and expeditiously otherwise than by a tunnel in a country, where, during the winter the temperature ranges between 20° and 30° below zero, and where, to use Mr. Read's own expression, the ground is heavily covered with snow during six to eight months in every year, and numerous snow slides and avalanches of great size take place. From Mr. Taylor's report it appears that the attempt to work the Red Cloud Mine by means of a shaft in September and October, 1881, had to be abandoned, and was consequently not attempted in the winter of 1882-3. It is to be observed that the outcrop of the Red Cloud lode is about 1000 ft. lower down the mountain than that of the company's J. B. Norris and Mamie Pratt lodes.

As showing the correctness of Mr. Taylor's view, it is noticeable that Mr. Read in his report states that at the time of his visit to the company's property "it was impossible to examine any of the above-named neighbouring mines on account of the great depth of snow covering everything up, shaft, houses, and in some cases the workings are all packed full of snow. In carefully considering the committee's scheme to re-construct the company, and Messrs. Rickard's scheme of working the mine by sinking shafts and driving the tunnel, it must not be forgotten that a necessary preliminary would be the buying up of the American debenture and shareholders' interests (they hold three-fourths of the debentures, and about half of the share capital), or the procuring their assent to the proposed scheme. The purchase of these interests, if practicable, would entail an outlay, at present prices of at least 30,000*l.* in cash, and the negotiations would occupy so long a time as to render it improbable that work could be resumed at the mines this season before the snow commenced; while to obtain the American debenture and shareholders' consent to work the mine on Messrs. Rickard's system would be an impossibility, many of the Americans holding large interests in the company being men of considerable mining experience, and having invested in the undertaking for the purpose of developing the mines on the tunnel system, which is the system almost universally adopted where possible in this and many of the surrounding districts.

The committee have bestowed so much labour in investigating the company's affairs that it is a matter of regret to the board that they are unable to concur in the committee's recommendation as to the reconstruction of the company, or, in Messrs. Rickard's views, as to the working of the mines; these recommendations would be impracticable, for no other reason than that Mr. Carter (who joined the board in February last as the representative of the American proprietors) has informed both the committee and the board that he has positive intention not to agree to a reconstruction of the company. Under all the circumstances the board are strongly of opinion that the wisest course will be to issue the balance of the 40,000*l.* debentures (about 17,000*l.*), and to continue to drive the tunnel for another 500 ft. to cut the Mamie Pratt lode, which is admitted by Mr. Read to be a continuation of the Red Cloud lode.

According to Mr. Taylor's estimate this will cost for labour a maximum of 5*l.* per foot (2500*l.*), or say, with other incidental expenses, 5500*l.*; and if continued at once it can be accomplished in about five months, simultaneously with this and at little cost the company can drift and rise on the J. B. Norris lode, and from the favourable way in which Messrs. Rickard speak of this lode it is probable that in doing this the lode will become more compact, and a fine mine be opened on it; while if the Mamie Pratt lode when cut proves as rich as the Red Cloud lode (as is confidently anticipated by all parties, and as the backs of the lode indicate), by drifting on this lode on each side of the tunnel and by rising on the lode from the tunnel enough ore would probably be obtained not only to pay good dividends, but also to provide ample funds for fully developing the company's property. If the above view be adopted, and it is one in which the American debentures and shareholders fully concur, the American proprietors would as the board are advised by Mr. Carter subscribe for the whole of the balance of the debenture issue on the terms stated in letter from him dated June 27. The offer contained in this letter practically comes to this—that if debentures be issued at their par value each 10*l.* debenture would be entitled to 40 fully-paid shares of 1*l.* each as bonus.

In provisionally agreeing to these terms the directors have thought it right to stipulate that the English debenture-holders should have the option of subscribing for such an amount of the debentures now to be issued as would be equal to half the debentures now held by them, and that if they exercise this option they should be entitled to be placed on the same footing as regards bonus shares in respect of their present holding as the subscribers to the present issue. The directors suggest that General Hamley and Messrs. Welch and Kraushaar be asked to join the board. As against the liabilities of the company there are considerable assets, consisting of valuable machinery and stores at the mines, and a sum of 1200*l.*, which has been paid to the manufacturers in America, on account of a contract for the concentrating mill and additional machinery, ordered, but not yet delivered. In conclusion, the directors trust that the English shareholders will see their way to co-operate heartily with the American proprietors in the development of the mines.

#### ORGANOS GOLD MINES.

An ordinary general meeting of shareholders was held at the Cannon-street Hotel, yesterday, when the statement of accounts and report of the directors were submitted. The directors congratulated the shareholders upon the success which has so far been attained at the mines, and upon the excellent prospects of the future. The Organos Gold Mines (Limited) was registered early in the year 1881, and immediately after the allotment the services of Mr. J. G. Green were secured as manager, and this gentleman having arranged for the necessary machinery, proceeded with it to Colombia, where he arrived about the middle of May. Here he was delayed by an accident to the steamer Honda, and, subsequently, by the sinking of the only vessel to Neiva, which town is within a comparatively short distance of the company's property. He made, however, the best of his way to the mines, where he arrived at the beginning of July, leaving the machinery to be forwarded by the agents, whom he had appointed upon the route. Though all dispatch was observed, the whole of the machinery was not delivered until the end of the following March. The unavoidable delays which had taken place rendered it obvious that further capital would be required, and at the suggestion of the manager, debentures to the extent of 10,000*l.* were ordered to be issued. Of these there have been subscribed for to date 3583*l.* 15*s.*

It should be observed that had it not been for the breaking down of the two steamers on the Magdalena river (the conveyance upon which the directors had calculated for taking the machinery to the mines), and the consequent great delay in the erection of the stamps, no money would have been required beyond the original capital of the company. In August, though the machinery was in a still incomplete condition, the sinking was commenced, and 13 tons 6*lb.* of quartz produced 30*oz.* of gold, being at the rate of over 1½*oz.* per ton. This rate is about equal to that expected by the gentlemen whose reports were contained in the prospectus, and double that upon which your directors had based their calculations contained in the same document. Treating the quartz as then stated until the completion of the machinery, but a small quantity was nevertheless occasionally put through the mill, and the proceeds of the gold will be found mentioned in the balance-sheet.

Permanent crushing has now been commenced with 18 heads of stamps, and according to the latest reports the return is of a satisfactory nature. Under date May 24 the manager writes:—"Plates producing 3 lb. of amalgam per 24 hours," which it is explained "would be equal to 1 lb. of gold per day." When read by the light of the manager's statement of December last, that "with 18 heads I calculate on getting at least 30*lb.* per month, at a cost of 500*l.* or 600*l.*," this will, no doubt, be considered very satisfactory. The remaining six heads of stamps (making 24 in all) are erected, but not connected to the mill. The connections were, however, sent out at the end of May, so that by the end of the current month it is expected the complete set of 24 heads will be at work. As the gold obtained was from crushing before the completion of the machinery, and while considerable capital expenditure was being made it has been deemed expedient to deduct the proceeds from that expenditure. The interest upon the debentures has been charged to June 30, but being chargeable only against profits is included in the sundry creditors.

The report of the proceedings will be published next week.

#### NEW VAN CONSOLS AND GLYN MINING COMPANY.

The report of the directors prepared for presentation at the forthcoming meeting states that the reconstruction scheme received the unanimous sanction and approval of all present at the last meeting. The purpose of the scheme was to make all the shares of one uniform value—by doing away with the preference shares—and to raise capital to carry on the mine, and to pay off any debenture holders who would not accept shares in lieu thereof.

The nominal capital of the company is 80,000*l.* in 80,000 shares of 1*l.* each, and the directors have in accordance with their powers allotted 50,175 with a liability thereon of 2*s.* 6*d.* per share; 3710 fully-paid shares have been issued to the preference shareholders in the late United Van Consols Company, being at a bonus for their preferential interest and 972 (fully-paid) to those debenture holders who have exchanged their debentures for shares. You will, therefore, note that the shares allotted are 59,557. The total sum called up in respect of the 1*l.* on allotment and first call of 6*d.* per share is 3763*l.* 2*s.* 6*d.*. There were 1860*l.* 8*s.* 8*d.* due from various shareholders on April 30 last, since which date—down to June 22—a further sum of 497*l.* 13*s.* has been received. The directors, however, still hope that a considerable portion of the amount in arrear will be paid when the improved state of the mines becomes known.

It will be noticed that the result of the company's operations for the past six months is a loss of 1436*l.* 10*s.* 5*d.*, which it is proposed to pass to capital account. The best endeavours have been exerted in trying to persuade all the debenture holders to accept shares in lieu thereof, the consent of seven holders has been obtained, but all with the proviso that the consent of the directors has been made a second call of 6*d.* per share, the proceeds of which will be employed partly in paying off debts of the old company and developing the mines.

PEDNANDREA.—A special meeting has been called to consider the resignation of Capt. John Nicholls, and to make arrangements for the future management of the mine. In adopting this step, written a correspondent, Capt. Nicholls has certainly not done what was expected of him. He came to Pednandrea with high credentials, and

it was thought he would improve the mine considerably. These sanguine anticipations have not been realised, and the meeting held a fortnight since showed that the concern was in a terribly disappointing state. That so depressing an effect, indeed, had the great loss been upon the adventurers that several important shareholders seriously threatened to throw up the sponge at the next meeting if an equally unsatisfactory statement should be presented. The shareholders, however, expressed confidence in the manager, who was requested to reduce the costs. The announcement of the resignation of Capt. Nicholls so soon after agreeing to make an effort has caused, to say the least, surprise.

**LEVANT.**—A sixteen weekly meeting of shareholders was held on the mine on Tuesday. Mr. R. White, the purser, presided. The tin sales realised £7307. (10 tons unsold being credited because of an accident); copper sales, 2678*l.*; arsenic, 80*l.*; and, with other receipts, total credits, 7270*l.* A profit was shown—85*l.* brought over from last account being included—of 679*l.* 16*s.* The report of the agents (Capts. J. Newton, M. Trembath, and H. Nankervis) was adopted, and a dividend of 5*s.* per share was declared. At the dinner the Chairman expressed an opinion that Levant would go on paying small dividends for years to come, and Capt. Boys (Wheal Owles) said there was not a better mine in the county, underground.

**EAST BOTALLACK.**—At the meeting on July 13 the accounts for the 16 weeks ended June 23 showed a credit balance of 6*l.* 10*s.* 8*d.* A call of 3*s.* per share was made. The Chairman congratulated the shareholders upon the improved prospects of the concern. Captains Eustice and Trehair, in concluding their report upon the mine, say:—At the stamps we are engaged in putting the machinery in good order and enlarging the dressing-floors, in order to enable us to treat the increased quantity of tinstuff that will be available as soon as the driving of the next level is carried out. It will take about another month to complete this work when stamping will be at once commenced, and regular monthly sales of tin follow, and if the lode in the driving of the next level continues equal to what it has been in the shaft, and judging from the district we fully expect it will, we believe before the end of the year to raise sufficient tin to make the mine self-supporting, and with further development in depth pay good profits. All the machinery throughout the mine, including the pitwork recently put down in the new shaft and the line of rods thereto from the engine, continues to work remarkably well. We have now in stock at surface tinstuff sampled containing over 1½ ton of black tin which has not been credited in the accounts presented to-day.

**CAMBORNE VEAN.**—At the meeting on Tuesday the accounts showed a loss on the six months' working of 501*l.* 14*s.* 7*d.*, and a debit balance after deducting the January call of 204*l.* 4*s.* A call of 1*s.* per share was made. Capts. Prisk and Johns, in their report, stated that the 56 cross-cut, driving north of the north lode, is still in a beautiful channel of ground, having passed through several branches rich for ore. They have every confidence in meeting with a good lode here in the course of a few fathoms driving. On the whole they considered their prospects very encouraging. Their last sale of copper was 40 tons, and they hope to do as well, if not better, before the next meeting. The manager (Captain Prisk) remarked that at the present their operations were limited. He attached the greatest importance to the cross-cut driving north, and in the course of the next four months he had every confidence that they would meet with the lode. Mr. W. H. Rule considered that they had tribute ground enough there, provided they had a skip-road down to the 140 fathom level, to make a profit. It spoke well for the mine that during the last six months four men had broken 170*l.* worth of copper. If they had a skip-road down to the 120 fm. level they had tribute ground there that would pay at 10*s.* tribute. He thought the working of that mine ought to be conducted for eight guineas per month, in order that outsiders might have no ground for complaint. They had a good mine in Camborne Vean. There was nothing like it in the county, and he believed they would pay a dividend there before any other mine that had been started in Cornwall within the last five years.

**LOVELL TIN MINE.**—In the south part of this mine a very rich lode was discovered some years since, which from about 20 fms. from surface paid regular dividends until at a further depth of 30 fms., or 40 fms. from surface, the lode had dipped into the adjoining property, from which time regular and continuous calls have been made upon the shareholders, until it was decided to abandon this part of the mine, and attention was directed to the lode in the north part; after sinking some trial shafts on four lodes, the manager, Capt. Joseph Prisk selected which he considered the most promising for the engine or main shaft, and already, although only 14 fms. below the surface, a most promising lode is being opened up, varying from 5 ft. to 8 ft. wide, in the bottom of the shaft, all the lodestuff being stamped work, and which, to use the manager's own words, "a little improvement in the quality of the lode, which we are sure to have as we get deeper, will place this mine in a good position once more." This mine has the advantage of water-power both for pumping and dressing.

**DOLCOATH.**—Although Dolcoath Mine has been going through a period of adversity, the adventurers have been given to understand that it continues to look remarkably well, and that whatever unpleasantness may take place with regard to the demand on the part of the landowner, and the frauds by John Mayne, the mine itself will prove to be all right. It appears that Dolcoath Mine has recently been inspected by a gentleman of undoubted respectability and great experience, intimately acquainted not only with the workings of our mines, but also with the great body of Cornish mine adventurers, both those outside the county, and those on this side the Tamar. The following are the more salient points in this highly interesting report:—

The engine-shaft is sunk 12 fms. below the 364 in a fine course of tin. The lode in this shaft is worth 7*l.* per ton for tin in its rough state. The width of the lode carried in sinking the shaft is about 8 ft.; but a few fathoms west of shaft, in the 364, at the junction of the south lode with the main lode, the width of both together is about 30 ft., and worth 7*l.* per cubic fathom. In about a month from this time level will be started east and west of the engine-shaft at the 375, when a splendid section of tin will be opened up for stamping. The writer goes on to say that the deeper the Dolcoath mine is driven, the richer the ground very easy for working. It is his opinion that this south lode will yield large quantities of tin—should it properly developed; but in order to do this a shaft should be sunk to prove it east of the present workings. This is the new shaft which has been frequently spoken of at Dolcoath meetings. The 364 fathom level has been driven 104 fathoms east of the engine-shaft. There is a capital shoot of tin for 30 fathoms east of this shaft, and then a comparatively poor bar of ground, but beyond this there is a fine lode of tin for over 50 fathoms long, standing entirely whole from the 364 to the bottom of the 332, with winzes sunk through ready for working. The most important part of this report, however, is that in which the writer says:—"I find extensive alterations have been made in the pitwork at the engine-shaft so as to ensure the uninterrupted working in the bottom of the mine during the winter months. The reserves having been increased in the deep levels, drivings will shortly be started east and west of the engine-shaft in a fine course of tin in the 365." The report winds up with the following encouraging statement:—"The least question at Dolcoath is settled for 25 years, and the mine can now be worked to yield splendid profits—probably would give profits to the extent of 40,000*l.* per annum with tin at the present price."—*West Briton*.

**GAS SHARES.**—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been:—Buenos Ayres New (Limited), 8*½*; Bombay (Limited), 5*½* to 6; Brighton and Hove General (Ordinary), 34*½*; Commercial Consolidated, 212 to 213*½*; Continental Union (Limited) Ordinary, 27*½*; ditto New, 79 and 72, 19; ditto 7 per cent. Preference, 27; European (New), 13*½*; Gas Light and Coke, (Ordinary), 191*½* to 192*½*; ditto, H, 7 per cent. Maximum, 142; ditto, L, 10 per cent. Pref., 221 to 224*½*; ditto, 4 per cent. Debiture stock, 104*½* to 105*½*; Imperial Continental, 202*½* to 203*½*; Monte Video (Limited), 15*½* to 15*¾*; Rio de Janeiro, 22*½* to 23*½*; South Metropolitan, A, 224 to 224*½*. Gas stocks very firm, especially home companies and Gaslight and Coke.

**INSURANCE SHARES.** have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Atlas, 18*½* to 18*¾*; Commercial Union, 19*½* to 19*¾*; City of London Fire (Limited), 2*½*; ditto Corporation (Limited), 3*½*; Fire Insurance Association (Limited), 2*½*; Marine (Limited), 26*½* to 26*¾*; Indemnity Marine, 13*½*; Lancashire, 6; Liverpool, London and Globe Fire and Life, 20*½*; Phoenix, 24 to 24*½*; Railway Passengers, 7*½*; Royal Exchange, 392 to 395; Universal Marine, 8 to 8*½*. Insurances steady, marine companies easier.

**TRAMWAYS.**—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

**RAILWAY AND GENERAL MARKETS.**—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk, Birch-lane, writes:—Opening: A partial collapse in American railway stocks and shares was looked for this morning, sales being pressed last night from New York after business hours. There is instead a general recovery of from ¼ to ½. Atlantic Firsts are 46*½* to 47*½*, and Erie 38*½*. Unified are a steady market at 71*½* to 72, and all things considered, are wonderfully firm. The prospect of securing Great Eastern at 70*l.*, or below, is not attracting buyers as yet. Pending the meeting to be held at three o'clock this afternoon, dealings in Organo shares are practically suspended; shares are quoted 1½ to 1¾. Orebars are not benefited by the 2*s.* 6*d.* dividend declared on Tuesday, being 2½ to 2¾; Clontales, 5*s.* 6*d.* to 6*s.* 6*d.*; East Wheel Rose, ¼ to ½; Old Shepherds, ¼ to ½; Home Mines Trust, 9*s.* to 11*s.*; Mounts Bay, 4*s.* to 6*s.*; Prince of Wales, ¼ to ½; call (2*s.* 6*d.*) paid. Closing: Great Eastern are no better than 69½; but there is a steady tone elsewhere; Brighton A and Sheffield A being ¾ higher, and United ½. Mexican Railway Ordinary are 1¼*l.* up, and Trunks have a firm appearance. Colombian Hydraulic, 5*s.* 6*d.* to 6*s.* 6*d.*; Devon Consols, ¾ to 4.

## FOREIGN MINES.

**BARANCANES COPPER.**—J. Garland, July 7: During the month the new engine-shaft was sunk 4 fms., making the depth 6 fms. 4 ft. 2 in. The ground, excepting the last 2 ft., which has been a mild light kilias, has been throughout a stiff brown sandstone. We have commenced driving a cross-cut from the 24 south towards the new engine-shaft by four native miners. The crushing machinery, engine, and boiler, &c., have arrived at Lisbon, and will we expect soon reach the mine. We are taking out foundations and making arrangements for receiving and placing the machinery. For the last two or three weeks it has been very difficult to get a requisite number of men to carry on the work, it being now full harvest time. The miners' cottages are built and will we hope be completed this month.

**CALIFORNIA GOLD.**—A Rickard, June 23: The shaft is down 1454 ft. the hauling ropes have deteriorated during the past 10 days more rapidly than could have been anticipated, and it is desirable for safety to suspend work in the shaft until new ones have been received. The 1400 ft. level east is in 81 ft.; the lode maintains its great regularity in its bearings, being 2½ ft. wide, yielding 6 tons of fair grade milling ore per square fathom. The 1400 west is in 70 ft.; the ground opened out during the week has been of a bumpy nature, the end shows 20 in. of good grade ore. The 1300 winze west is down 32 ft., and is blocking out valuable stopping ground; the lode is 3 ft. wide, yielding 7 tons of milling ore per square fathom. The 1300 rise west is up 14 ft.; the lode is smaller, work 6 in. wide. The extension of the stopes in this level has been carried 27 ft., and stopping ground valued at 5 tons per square fathom is being opened out west of the main stopes. The 1300 stopes west are putting out 10 tons of fair grade milling ore per square fathom. From the 1250 ft. level stopes east an output of 6 tons of high grade milling ore and ¼ ton of smelting ore is being made per square fathom of excavation. The 1250 rise east is up 51 ft.; the lode in the rise is now 1½ ft. wide, yielding 3 tons of milling ore per square fathom. The 1100 rise west is up 25 ft.; work has been resumed in this rise, but no improvement has yet been seen in the lode, which is 6 in. wide. In the 1100 stopes east the lode continues to yield satisfactorily; a large portion of the mineral now returned comes from the footwall vein.

—Mr. Rickard, July 19: Mill run, 320 tons; yield, \$2000 (400*l.*).  
**COLORADO UNITED.**—Mr. Macrae, June 23: The 13th level, east of the silver ore shaft, continues to hold from 3 to 4 in. of ore, and is being steadily pushed forward. Stope No. 2 at the back of this level is looking splendid carrying from 4 to 5 in. of good ore. The 12th level has no change, still carrying ore at the bottom of the drift. Stope No. 2 at the back of the 12th level was completed on Tuesday last. Stope No. 3 is looking well, carrying 4 in. of good ore. The work in the drift has been pushing the water to the rush of water in the creek, which carries with it mud and sticks, and thus blocks the water-wheel, and necessitates the shutting down of the mill every afternoon to clear the wheel. A screen has now been put up, which it is expected will put a stop to the present state of affairs. The following sacks have been shipped during the week:—180 sacks second-class cobbed ore, weighing 9 tons 1120 lbs.; 31 sacks screenings, weighing 1 ton 1080 lbs.; 70 sacks zinc headings, weighing 3 tons 1245 lbs.; total 281 sacks, weighing 14 tons 1445 lbs.

Mr. Hamill has still called to the effect of the 10th level, and was resuming work in the 13th level—the is the deepest level. The profit was \$4709 and 49 vouchers for ore were this day received by the company, showing a total of 138 tons 323 lbs., worth \$15,536 18*c.*

**EBERHARDT.**—Frank Drake, June 23: South drift from No. 3 raise advanced 11 ft.; total 148 ft. The character of the rock continues about the same as last reported. The seam along the wall is carrying about the same amount of quartz. The raise from the 700 ft. point in this drift is up 8 ft., in good looking ground. When the carmen are not employed removing the waste rock I have sent the work in the drift to the new tunnel, being now advanced to a total length of 74 ft. The ground is quite soft, it being mostly clay, and in this clay we find stringers of carbonate ore.

**GOLD COAST.**—Report from the mine, dated June 11, announces the arrival of the manager. Referring to the mill he says:—"I do not intend to start it again until we have effected some necessary repairs, for I want to get everything in order for a solid six months, crushing on our first quality ore. I think that within the present month these repairs will be finished, and I am in hopes that by that time the mill will have got the workings and thereby enable us to supply the mill with an abundance of the rich ore that I have so often written about. The Elephant stamper will also by that time be again at work." Report goes on to say "You will probably be pleased to hear that the heap of inferior ore from which we have hitherto been crushing is now nearly finished. In future I intend with the aid of the new tunnel to extract nothing but the best ore; that is, until we have a large increase of stamping machinery. So far as we have got with the cleaning up (and we have not near concluded it yet) the result is very satisfactory, for I have over 300 tons of hard amalgam. We will probably finish the cleaning up by the end of this week, when we shall at once send home the gold consigned to the company's account at the Clydesdale Bank." The new boiler and engine is almost completed. The ore in the faces of the levels going north in the mine looks better than ever, and when the new tunnel is finished we will get plenty of that ore to keep the mill going. Deaths among Europeans have been so prevalent here lately, that I am doubly proud of our white men's boast that they neither die nor get invalided home as unsuitable for the climate."

**HOLLAND GOLD.**—July 3: I have not yet retorted the amalgam from the last month's run. As soon as that is done I will send report for the month. The mill only ran by day, and the ore was not so good as usual, so the yield will be comparatively small. I am pleased to say that in cutting in from the bottom of the Gallimore we have got into some strings of good ore. Good produce is being made in the drift from the bottom of Hawkins' shaft, and it will not be long now before we hole through to the winze. The wheat harvest is over, and there is now an abundance of labour.

**KAPANGA GOLD.**—Telegram: Winze holed. Continued torrents; 70 level flooded, repeating dump. Scotty no return.

**NEW EMMA SILVER.**—G. Cullins, June 25: Since my report of June 18 I have sunk the shaft 4 ft., making the depth below Bay City Tunnel 188 ft., and have extended the cross-cut 15 ft., making the distance from the tunnel 141 ft. Vein matter continues to look favourable, and pumps and machinery working nicely.

**NEW EMMA SILVER.**—George Cullins, July 2: Since my report of June 25 I have sunk the shaft 3 ft., making the depth now below Bay City Tunnel 191 ft. Have extended the cross-cut 12 ft., making the distance from station 153 ft. Have had survey made from incline to cross-cut, and the distance still to run to make a connection is about 40 ft. Rock continues to look very favourable, being much more mineralised, with occasional nodules of ore, but not enough to save. Have made three small shipments of concentrated ore, which will appear in June accounts. Concentrating is still being done by tributers.

**PESTARENA UNITED.**—Henry J. Gifford, July 15: Val Toppa: No. 1 level south, on new lode, has still further improved; the lode is regular, and in a more genial class of rock, and if this continues we shall be opening out some stopping ground. The end at present produces about 5 tons of 15 dwts. per ton per fm. The flat exploratory stopes, on the east side of No. 1 level, turns out about 15 tons per fathom of 10 dwts. per ton; and, although a portion of the quartz has to be rejected, the western part of the stopes, especially along the footwall, shows some good veins of pyrites. The rise in back of No. 1 level goes forward on a small branch of poor quartz, spotted with very granular pyrites. The stopes above No. 4 level, on the flat lode, is quite finished. The other stopes continue to yield about the usual quantity of ore. The mill duty at both districts is somewhat higher than for the preceding month, that of Val Toppa being 80-4 per cent, and Pestarena 32 per cent. Val Toppa this may be accounted for from the fact that in May no tailings were treated, whereas last month we had the tailings for both months.

—W. Roberts, H. P. Clemes: Pestarena, No. 5 Lode: The 33 end north has become continuous, and contains less quartz; the yield is 2 tons a fm. of 4 dwts. a ton; 55 end south continues in hard micaceous rock with a small branch of ore against the footwall, yielding 2 tons per fathom of 1 oz. per ton. The 65 end south is in partially decomposed micaceous schist, with quartzose bands carrying a little pyrites, yielding 5 tons per fathom of 4 dwts. per ton. We have within the last few days cut a little water. The 80 end north shows the lode much contracted and without ore. The 80 end south carries a large quartz lode traversed obliquely by a head of slightly softer rock, yielding 9 tons per fathom of 6 dwts. per ton. The 90 end north is also in massive quartz carrying ore against each wall, and yielding about 8 tons per fathom of 10 dwts. per ton. The 90 end south still maintains the spile of ore last referred to, but is not so productive; it, however, gives a little saving work. On No. 1 lode the 80 end north and south are still in the 120 and north is in hard micaceous schist, and carries a small leader of pyrites yielding 2 tons per fathom of 9 dwts. per ton. The 130 end south is in easier rock, and carries a small mixed lode against the footwall, yielding 3 tons per fathom of 13 dwts. per ton. At Pozzono the adit end is in hard micaceous rock, and the lode is taking a more easterly direction. The stopes in the aggregate are producing much the same for quantity and quality of ore as when reported on the 1st of the month. All work at surface progress satisfactorily, and our machinery continues in good working condition.

**PIERREFITTE.**—Manager, July 14: Since my last report a great deal more blende than usual is found in several of our stopes and which has taken the place of lead to some extent. The result is we have not the same percentage of lead from the ore broken as we usually get. This will change again soon I have no doubt. We have broken during the past fortnight and sent to the floors 650 tons of mineral, and from this we have extracted 76 tons of lead and 55 tons of blende. There is no change to note in the ends in the upper part of the mine going north-west and south-east. The lode in No. 2 level is much improved in value. In continuing to cross-cutting being in the lode about 8 ft. wide. In the back of this we have schist, and it is possible we have the hanging-wall of the lode. I have now put the men to drive on its course both ways. Yesterday the engine was put to work, and went very well indeed. To-day everything will be got ready, so that we shall be able to use the engine for driving one of the crushers, which we intend to do on Monday next. The water has very much fallen off lately, owing to hot dry weather, and to the farmers taking some from the ravine to water their meadows, so we have not enough to drive one crusher and the stone-breaker together. At Castillon we have opened out on the lode about 2 fms. In a few days time we shall be obliged to begin to form the gallery. The ore-bearing part of the lode here is about 3 ft. 6 in. wide—i.e., the part on which we are driving, and is composed of silver-lead, blende, white spar, and gossan, worth 1½ ton lead and 2½ of blende per fathom. This is a very promising lode.

**RARA FORTUNA.**—May 31: I have much pleasure to announce that the miners broke through the cross-cut to No. 1 winze last night, and the water lowered a considerable number of metres during the night. I hope in a few days to entirely open the communication that we may drive north and south on the lode, and at the same time go on sinking the winze, when we will be able in a short time to raise mineral from that part of the mine, so long anticipated, which I trust will give additional impulse to our undertaking. I have 7 tons bagged and expect the carts hourly to dispatch the same to railway; this will make 14 tons this month. About 2 tons more were raised yesterday which will go to next month's account. I believe I shall be able to ship about the same amount in the month of June as the present month, and if the lode in No. 1 winze proves good, there will be an increase. I have made several economical changes in saving of labour, wood, oil, and wear of engine, four days a week. The shallow level south is looking better. The total length of cross cut from the main shaft to No. 1 winze is 11 metres 10 centimetres.

**RICHMOND CONSOLIDATED.**—Telegram, July 17: Week's run (one furnace), \$15,000, from 276 tons of ore; refinery, \$20,000.

—S. Longley, June 25: The 100 south drift from station has been run 21 ft. Total 528 ft. In limestone. The 100 north-west drift from above has been run 10 ft. Total 43 ft. On fissure in very hard limestone. The 1050 north-west drift from station (No. 1) has been extended 22 ft. Total 755 ft. In limestone. The 1050 north-west drift (No. 2) has been run 28 ft. Total 118 ft. On fissure in limestone. The 1050 north-east drift from north-west drift has been extended 23 ft. Total 568 ft. In limestone. The 1050 south-east drift from north-west drift (No. 1) has been run 26 ft. Total 39 ft. On fissure in limestone.

**RIO GRANDE DO SUL (BRAZIL) GOLD.**—H. Eddy, June 9: Serrito Mine: The new gallery is progressing fairly, and I expect to reach the productive part of the lode next week, so as to be enabled to duly report it.—Aurora Mine: The only change during the week is in No. 2 gallery west where the defined part of the lode has increased in size to 3 ft., but still of low quality. Near the top of the gallery and on the hanging-wall side we have found a small pocket of 7 lbs. weight of stone containing visible gold. This although apparently isolated I consider to be a favourable indication.

**RUBY AND DUNDERBERG CONSOLIDATED.**—June 24: Dunderberg: There are 15 tributers at work; there is no change to report in any of the stopes; no tribute ore shipped this week.—Home Ticket: The new shaft is now being sunk down in advance of the ore body, it is now down 20 ft. below the stopes; total depth 130 ft. below the surface. The ore body is looking fairly well and is improving slightly, it is now divided into two separate bodies one pitching north and the other south. The north stopes is about 12 ft. wide, and the south stopes about 6 ft. in width. I think, however, they will eventually join into one again, as there is a small stringer of low grade ore connecting. The output has been reduced to about 15 tons per day; this is owing to the shaft being sunk. The drift from the upraise 130 ft. below the old Home Ticket workings has been advanced 14 ft. this week; total 42 ft. from the upraise; 113 tons ore shipped this week, and 19 men at work.—Lord Byron: A small seam of good ore has been discovered by tributers which looks very promising. Have advertised for bids for running the tunnel 100 ft.

—R. Rickard, June 25: The Home Ticket ore body is opening out very satisfactorily; at one time it appeared to be pinching the footwall lay very flat for several feet but changed again very suddenly to a very steep pitch. The ore body in the northern end is now 12 ft. wide, and continuing wider as we go north. We have a greater lateral extent at present than we have had. The distance between the northern and southern extremity is now about 35 ft., with ore in both ends. The shaft is being sunk as far as practicable, and will soon be down deep enough so as to run under the present workings. We have decided to resume work on the Lord Byron; a contract is being set to run the tunnel, and, to all appearances, we have very good chances of striking ore.

Telegram, July 16: 113 tons ore shipped, 116 tons smelted, realising net \$1573; 14 tons tribute ore shipped, and 12 tons smelted, producing to company \$180.

**SANTA BARBARA.**—T. S. Treloar, Paris, June 2: In the mine our stopping operations for the stamps are confined at present to the lode above the adit, where it has further improved, having opened out to 9 ft. in width, and we have at least 10 fms. of backs upon it. The works relating to the machinery are progressing satisfactorily. The produce for May will be about 10000 oits., and so long as the lode now being stoped away continues as it is at present we shall, I hope, be able to keep the produce up to this figure.

June 17: The mineral treated at the spalling-floors during May was 1463 tons, of which 496 tons were rejected, and 967 tons stamped; 580 tons of the latter were raised from the mine, and the remaining 387 tons taken from the refuse heap at surface; 103 tons of amalgamation tailings were also re-treated at the No. 4 stamping-mill. The total produce obtained was 1551 oits. of gold (1086 oits. per ton), worth at 8*s.* 6*d.* per oit. 446*l.* 13*s.* 6*d.* sterling, and the estimated working cost for the month, at Exchange 21¼*d.* being 767*l.* 17*s.* 6*d.*, leaves an estimated loss of 321*l.* 4*s.* on the mine working total. In addition to 327*l.* 15*s.* 4*d.* estimated as having been expended on capital account in respect of the construction of the new water-course and pumping and hauling machinery. The pitwork will probably be ready about the end of June. As the pumping out of the water will, we expect, occupy not less than six weeks without any let or hindrance, it will be seen that the pitwork should be here not later than the end of September to enable us to put it in its place, fork the water, and get command of the bottom of the old mine before the expiration of the year.

The Mine Captain reports for May:—Holland's shaft has been made straight to the depth of 40 fms. by striking off from 1 to 3½ ft. of ground from the south side, which we considered could be done with safety, the shaft being over the inclination of the old mine. This stopes was commenced from 3 fms. below the 30 fm. depth, and a stopes of about the same thickness has been taken off the footwall to reduce the abrupt turn caused by the alteration made in the angle of the shaft at this point, thus making it more convenient for the skip-road and pitwork. The output of stone from the mine during the month is 1435 wagon loads, or equivalent to 5382 wagon loads per man boring. The pitwork for draining the mine was shipped from Liverpool on July 11.

**SEXTON.**—M. Scantlebury, July 15: The several stopes in the back of No. 4 level are suspended for the present, some of the men having left, whilst others are put to work on more profitable ground. There are thousands of cubic metres of ground; lode to come away at a profit with an advance of 3*l.* or 4*l.* in the price of lead. The stopes at surface is without change. No. 3 level west stopes under the old workings is still producing 10 cwt. of lead and blende ore per cubic metre. In the rise above No. 3 level east the lode is improved to 1½ ton of lead and 4 tons of blende ore per cubic metre, a very fine lode indeed. The back of stopes No. 1 is without change. The back of stopes No. 2 is set to seven men at 20 frs. per metre cube; lode 3 metres wide, and producing 12 cwt. of lead and blende ore per cubic metre. Stope No. 3 in the back of new stopes is set to eight men for the sum of 20 frs. per metre cube; lode producing 14 cwt. of lead and blende ore per cubic metre. I hope to have another company of men the latter part of the coming week for stopes No. 4 in the back, where the lode is 3 metres wide, and will produce 13 cwt. of lead and blende ore per cubic metre. I am pleased to say that the eastern part is opening up beyond expectation. St. Amelle level stopes Nos. 1 and 2 are without change since the 1st inst. About 650 tons of lodestuff has been sent to the floors since the 1st inst., producing 30 cwt. of lead, and blende ore. About 80 of our men have left, some of whom will return after the hay harvest is over, others having left because they were dissatisfied with the wages they were receiving. This will not affect us much as we have a good stock of ore at the mine broken; the latter part of the week I expect several good miners.

**UNITED MEXICAN.**—Mr. Hay, Guanajuato, June 15: Mine of San Cayetano de la Ovejera: In the end of San Juan west, the end looks pretty, as we have good ore on a width of 55 centimetres. Four metres backwards, or to the east, we are going to begin a contratiello, to be called second of San Juan. From this end we have sent this week 5½ cwt. of ore to Duran. In the frente No. 2 of Santa Rosa west, though as yet we have found no ore, I believe we shall soon come on the clavo we have been working on in San Juan lately. From the stopes in Santa Rosa we have sent 8½ cwt. of ore to Duran. During the week ending the 9th inst. we have driven in the communication between San Juan and Santa Rosa, and on last Wednesday night we holed in frente No. 1 of San Andre's east. In frente No. 2 of San Andre's east the ore is ramified on a breadth of 2 metres, and looks about the same as heretofore. We have driven in the 9th inst. a contratiello to Duran this week. Next week we begin a contratiello in this gallery that will be called second contratiello of San Andre's, and will communicate with frente No. 1. San Andre's east will start from the cross-cut to the bajo de la frente, where we have driven last week 90 centimetres. In the frente of No. 4 of San Andre's east, the width of the ore has increased to 90 centimetres, and, therefore, it will probably be of a lower ley than that of last week's extraction. We have sent to Duran this week 35 cwt. of ore. In the Pozo No. 1 (San Andre's) the ore is reduced to a width of 60 centimetres. We have remitted 5½ cwt. of ore to the reduction works. The Pozo No. 2 of San Andre's has holed in frente No. 4 of San Andre's east, but we continue to sink on the eschalo de the lode in this working, where the ore is 40 centimetres broad. This winze has produced 21¼ cwt. of ore, which have been sent to Duran. We have remitted of ordinary ore from all the workings 101 cwt., which makes 285 cwt. sent to Duran this week. Total extraction from San Cayetano this week 294 cwt. Returns from the mine of San Cayetano de la Ovejera for the week ending June 9, \$5973*l.*; outlay, \$1664*l.* 9*s.*

**ST. JOHN DEL REY MINING COMPANY (Limited).**—Advices received July 16, 1883, ex Tamar (s.), dated Morro Velho, June 18:—

GENERAL OPERATIONS.			
GOLD PRODUCE FOR THE MONTH OF MAY.—The gold extracted in this period amounts to 15,838 <i>5</i> oits., equal to 1225 <i>3</i> 212 ois. Troy. It has been derived as follows:—			
	Oits.	Tons.	Oits. per ton.
Stamps—Morro Velho	13,424 <i>3</i> from 5352	2	2508
ditto Piraia	1,579 <i>3</i> "	653	2419
Re-treatment	15,004 <i>1</i> "	6005	2498
	834 <i>4</i> "	—	0138
	15,838 <i>5</i> "	6005	2636
N.B.—79 tons of sand were stamped with the Piraia stone.			
PRODUCE FOR MAY			
Produce for May	15,838 <i>5</i> oits.		
Loss in melting	151 <i>4</i> "		
	15,687 <i>1</i> oits., at 7 <i>s.</i> 9 <i>d.</i> per oit.	£ 6,078	15 0
Cost			7,273 9 0

Loss for the month			
£ 1,194 14 0			
GOLD EXTRACTED TO DATE.—The produce for the first division of June, a period of 11 days, amounts to 5800 <i>6</i> oits., equal to 663 <i>7</i> 147 ois. Troy. It has been derived as follows:—			
	Oits.	Tons.	Oits. per ton.
Stamps—Morro Velho	5010 <i>0</i> from 1883	2	2666
ditto Piraia	650 <i>3</i> "	190	3478
Re-treatment	5670 <i>3</i> "	2073	2735
	130 <i>3</i> "	—	0063
Total	5800 <i>6</i> "	2073	2798
Add sundries recovered from sand taken from Morro Velho and Piraia sand courses	448 <i>8</i>		
Total	6249 <i>4</i>		

COST AND PRODUCE.			
Cost on working account .....			£1009 9 7
Deep adit, explorations, &c. ....	£243 9 7		
New works .....	183 3 3		
Rego .....	127 11 7	=	554 4 5
Total expenditure.....			£1556 14 0
Less value of produce, 1852 9 oils, at 8s. 1d. per oil. ....			793 6 9
Excess of expenditure .....			£ 770 7 3
On June 28, dated Rio 13 :—Produce seven days (second division of June)			
1500 oits; yield 3 2 per ton.			
On July 11, dated Rio 11 :—Produce for month of June 16,500 oits: yield			

## PROVINCIAL STOCK AND SHARE MARKETS.

**CORNISH SHARE MARKET.**—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (July 19) write:—There has been more activity in the market during the last few days, and East Pool and Dolcoath show a material advance and close at best. There has been an enquiry for West Kitty, South Crofty, and Tincroft at current rates. Subjoined are the closing quotations:—Blue Hills,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Camborne,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Carn Brea,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Cook's Kitchen, 28 to 29; Dolcoath, 54 to 55; New Kitty, 13 to 14; New Trumpet, 1 to  $\frac{1}{4}$ ; Pedn-ar-dra, 1 to  $\frac{1}{4}$ ; South Crofty, 8 to 8 $\frac{1}{2}$ ; South Crofty,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Frances, 9 to 9 $\frac{1}{2}$ ; Tincroft, 7 to 7 $\frac{1}{2}$ ; West Basset, 5 to 5 $\frac{1}{2}$ ; West Kitty, 13 to 14; West Pezvor, 4 to 4 $\frac{1}{2}$ ; West Tolgus, 10 to 12; West Seton, 15 to 16; Wheal Aar, 15 to 16; Wheal Basset, 5 to 5 $\frac{1}{2}$ ; Wheal Grenville, 6 to 6 $\frac{1}{2}$ ; Wheal Kitty, 1 to  $\frac{1}{4}$ ; Wheal Pezvor,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Uny, 3 to 3 $\frac{1}{2}$ .

—Mr. M. W. BAWDEN, Liskeard (July 19), writes:—The mining market is exceedingly quiet, and most shares stand at nominal quotations. The continued calls has had a depressing influence for some time past, and the outside public appear to be realising at best offers obtainable to avoid further losses. Subjoined are closing quotations:—Bedford United,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Carn Brea, 7 to 7 $\frac{1}{2}$ ; Cook's Kitchen, 28 to 29; Dolcoath, 54 to 55; Devon Consols, 33 to 34; Devon Great United, 18 to 19; East Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; East Looe,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; East Pool, 42 to 43; Glasgow Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Gunnislake (Clitters), 1 to  $\frac{1}{4}$ ; Herodsfoot,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Kingston Down,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Killfret, 2 to 2 $\frac{1}{2}$ ; Marke Valley,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; New West Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; North Herodsfoot,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Old Gunnislake,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Phoenix United,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Prince of Wales,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Caradon (Limited), 1 to  $\frac{1}{4}$ ; South Crofty, 8 to 8 $\frac{1}{2}$ ; South Crofty,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Devon Unity,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Frances, 9 to 9 $\frac{1}{2}$ ; Tincroft, 7 to 7 $\frac{1}{2}$ ; West Basset, 5 to 5 $\frac{1}{2}$ ; West Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; West Frances, 2 to 2 $\frac{1}{2}$ ; West Kitty, 13 to 14; West Mary Ann,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; West Phoenix,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Agar, 15 to 16; Wheal Cribor, 2 to 2 $\frac{1}{2}$ ; Wheal Grenville, 6 to 6 $\frac{1}{2}$ ; Wheal Hony and Trelawny,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Kitty, 1 to  $\frac{1}{4}$ ; Wheal Jane,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Pezvor,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Uny,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; St. Just United, 4 to 4 $\frac{1}{2}$ .

—Mr. JOHN CARTER, mine shareholder, Camborne (July 19), writes:—The share market has been very dull during the week. Cook's Kitchen, Carn Brea, South Frances, Agar, Killfret, South Crofty, West Frances, West Pollice, West Seton, and Wheal Uny have all declined, while Dolcoath and East Pool have improved. Subjoined are the quotations:—Carn Brea, 6 to 7; Cook's Kitchen, 28 to 29; Dolcoath, 54 to 55; East Caradon, 42 to 43; Killfret, 2 to 2 $\frac{1}{2}$ ; Marke Valley,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; New West Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; North Herodsfoot,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Old Gunnislake,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Phoenix United,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Prince of Wales,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Caradon (Limited), 1 to  $\frac{1}{4}$ ; South Crofty, 8 to 8 $\frac{1}{2}$ ; South Crofty,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Devon Unity,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; South Frances, 9 to 9 $\frac{1}{2}$ ; Tincroft, 7 to 7 $\frac{1}{2}$ ; West Basset, 5 to 5 $\frac{1}{2}$ ; West Caradon,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; West Frances, 2 to 2 $\frac{1}{2}$ ; West Kitty, 13 to 14; West Mary Ann,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; West Phoenix,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Agar, 15 to 16; Wheal Cribor, 2 to 2 $\frac{1}{2}$ ; Wheal Grenville, 6 to 6 $\frac{1}{2}$ ; Wheal Hony and Trelawny,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Kitty, 1 to  $\frac{1}{4}$ ; Wheal Jane,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Pezvor,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Wheal Uny,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; St. Just United, 4 to 4 $\frac{1}{2}$ .

**MANCHESTER.**—Messrs. JOSEPH R. and W. P. BAINES, share brokers, Queen's Chambers, Market-street (July 19) write:—We have very little matter for report to-day, the markets having been dull throughout the week, and values influenced by political news and dividend announcements generally tending towards ease. During a portion of to-day a somewhat better tone was exhibited, but this afternoon a relapse set in, and a general decline again resulted. The business in the several miscellaneous series reported for the week is very small, and even of what transactions are marked the majority are marked as odd lots. Values in these classes are moderately steady, taken as a whole, though numerically the declines are in excess of advances. Foreign funds are lower, with the exception of Argentine Public Works and Russian, which are fractionally better. Egyptians are all low, the United 1 $\frac{1}{2}$  Preference 1, and Daira Sanieh 1. Spanish 1 $\frac{1}{2}$ , and several others showing declines of  $\frac{1}{2}$  downwards. Mexican railways have ruled very flat, and after fluctuations are about  $\frac{1}{2}$  lower on the week. **RAILWAYS.**—The share market is nearly all gone for another six months, do not act investors so much, consequently the transactions recorded are few. The local concerns show very small change in quotations. National Provincial exhibit a rise of  $\frac{1}{2}$  in the New and a fall of  $\frac{1}{2}$  in the Ordinary. Higher: Manchester and Liverpool District,  $\frac{1}{2}$  to  $\frac{1}{4}$ . Lower: Lancashire and Yorkshire and Union of Manchester,  $\frac{1}{2}$  each.

**INSURANCE.**—Business very meagre. The alterations in values are:—Higher: Thames and Mersey Marine,  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Royal Liverpool,  $\frac{1}{2}$ , and Sea,  $\frac{1}{2}$ ; Lower: Lancashire,  $\frac{1}{2}$ , and Mersey,  $\frac{1}{2}$ . **COAL.**—Iron and Steel.—For the first three days under notice quite neglected, no dealings being marked; since a few straggling lots have changed hands, but they call for no remark. Balance of movements in prices again adverse. Boilewks unchanged, except the 12 $\frac{1}{2}$  paid issue, which show a fall, being now quoted 11 $\frac{1}{2}$  to 12. Ebbw Vale and both Sulphur and Copper concerns quoted here all easier. Higher: Patent Nut and Bolt,  $\frac{1}{2}$ , and Stavley Coal,  $\frac{1}{2}$ . Lower: Palmer's Shipbuilding, A,  $\frac{1}{2}$ ; Pellet's Coal,  $\frac{1}{2}$ , to  $\frac{1}{4}$ ; Cammells,  $\frac{1}{2}$ ; Boilewks (12 $\frac{1}{2}$  paid),  $\frac{1}{2}$  to  $\frac{1}{4}$ ; Lilliv and Tondri Ordinary,  $\frac{1}{2}$ ; Tharston Sulphur and Copper,  $\frac{1}{2}$ ; Canadian Copper,  $\frac{1}{2}$ , to  $\frac{1}{4}$ . **COTTON SPINNING.**—Very little doing in the established concerns, there being no general demand except for the best esteemed and high priced shares. Some attention is given to shares of concerns recently floated, the shares of one of which have changed hands repeatedly.

**TELEGRAPHIC DOLLARS.**—Higher: Anglo Pref.,  $\frac{1}{2}$ ; Globe Ordinary,  $\frac{1}{2}$ , and Western and Brazilian,  $\frac{1}{2}$ . Lower: Anglo Ordinary,  $\frac{1}{2}$ ; ditto Deferred,  $\frac{1}{2}$ ; and West Indian and Panama  $\frac{1}{2}$ .—**TELEPHONES.** Quiet, and all easier where changed, United being  $\frac{1}{2}$ , and Lancashire and Cheshire 6d., and ditto New 3d. lower. **MUSCULAX.**—Aggregate of dealings very moderate. Gas Light and Coke, A, Ordinary are 4 higher, and Hudson's Bay and Miller's Sea lower. Further than these the alterations are not of much moment.

**RAILWAYS.**—The tone in this market has materially altered during the last few hours, as whilst most stocks were recovering in the early part of the day, all have gone heavy this afternoon on the calling of a Cabinet Council for this evening, and the Bank return being disappointing. Last week Great Eastern stood at 74, and Great Northern, A, at 114, but on the report of the former their stock has receded to 69 $\frac{1}{2}$ , and "bear" operations have occurred in the latter in anticipation of their report also being disappointing to holders. All are affected, and lower values are general. The Grand Trunk of Canada traffic is 63.6d. total increase, which is estimated very roughly, and they have suffered sympathetically, 2nd and 3rd Pref. going down heavily at close. Americans without support, and all following weakness came from New York.

## SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

**STIRLING.**—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (July 12), writes:—During the past week markets have been very quiet as usual at this holiday season. While the unsettled state of politics and the firmer state of the money market help to restrict business; but if the harvest turns out favourable as expected business will no doubt improve later on.

In shares of coal, iron, and steel companies the principal business has been in Marcellas, which declined from 94s. to 78s. on unfavourable rumours about their lease and the approaching dividend announcement; but they are now firmer about 85s. Cardiff and Swansea, 45s. to 55s.; Shotts Iron, 45s.; and Skerrie Iron, 15s.

In shares of foreign copper and lead concerns business also is quiet. Tharsis have declined from 61. 18s. to 61. 14s. 6d. Russia Copper shares and debentures offered at 40s. 18s. 6d. to 40s. 14s. 6d., but have nearly recovered all this fall. Belt Copper are at 20s. to 25s.; Corporation of South Australia, 8s. 9d. to 11s. 3d.; Mason and Barry, 14s.; Pierrefitte, 13s. 9d. to 16s. 3d.; Senteles, 5s. to 7s.; Tocopilla, 5s. to 7s.; and York Peninsula Preference, 15s. to 17s. 6d.

In shares of home mines there is no particular change to notice. Prince of Wales shares are expected to go better, as the mine is improving; they are now 7s. 6d. to 10s.; Bedford United are at 27s. 6d. to 32s. 6d.; British United, 10s. to 15s.; Collieries, 3s. to 5s.; Coal-v-Power, 2s. to 2s. 6d.; Caradon Consols, 5s. to 10s.; Conway Valley, 15s. to 20s.; Carn Omborne, 15s. to 17s. 6d.; East Long Leach, 15s. to 20s.; East Honey, 10s. to 15s.; Fromoch, 15s. to 20s.; Gunnislake (Clitters), 5s. to 7s. 6d.; Llandegus, 3s. to 5s.; New Terras, 5s. to 7s. 6d.; Royalton, 10s. to 15s.; Silver Hills, 3s. to 5s.; St. Just United, 5s.; Tamar, 10s. to 15s.; Trehartha Leman, 6s. 6d.; West Lishorne, 10s. to 15s.; Wheal Castle, 2s. to 5s.; Wheal Hony, 10s. to 15s.; Wheal Jane, 10s. to 15s.; and Wheal Sister, 5s. to 10s.

In shares of gold and silver mines business continues quiet. Denver shares should be worth attention, as the management is now in the hands of the managing director of the California Company along with Messrs. Rickard Brothers, and profits are expected immediately. A new company—the Argenta Falls Silver—in 14 shares is very favourably spoken of. It is said a dividend will be declared within six months, and for the first year there will not be less than 15 per cent. Mr. Kingsmill, brother of the manager of the British Linn 14 s. has been resident near this property for several years, and has given a disinterested opinion on it, which entirely confirms the statements in the prospectus. Richmond declined to about 6 $\frac{1}{2}$  to 6s., but is now better about 6 $\frac{1}{2}$ . Akat-koo are 3s. 9d. to 6s. 3d.; Brazilian Gold, 2s. 6d. to 5s.; Oankim Bamoo, 5s. to 7s. 6d.; Callao Bis, 12s. to 13s.; Chontales, 6s. to 8s.; Don Pedro, 1s. 3d. to 3s. 9d.; Dieu Donne, 1s.; Flaviola, 2s. 6d. to 5s.; Gold Hills, 10s. to 15s.; Gold of Canada, 2s. 6d. to 5s.; Gold Coast, 15s. to 17s. 6d.; Hawkins Hill, 5s. to 7s. 6d.; Indian Kingston, 10s.; Kapanga, 5s. to 7s.; Kohinor, 14s. to 16s.; Last Chance, 1s. 6d. to 2s. 6d.; New Britain, 10s. 4s. to 6s.; Organo, 3s. to 3s. 6d.; Potomac, 13s. 6d. to 18s. 3d.; Port Phillip, 2s. to 3s.; Rube, 22s. 9d. to 31s. 3d.; Tambrachery, 5s. to 6s.; Tacualla, 13s. 9d.; Victoria, 12s. 6d. to 15s.; West Callao, 17s. 6d. to 22s. 6d.; and West Frontino, 2s. 6d. to 5s.

In shares of Oil and Miscellaneous Companies business is quiet. The principal alteration is an advance in Nobel's Explosives from 28 $\frac{1}{2}$  to 29 $\frac{1}{2}$ . Lawes' Chemicals, 6 to 6 $\frac{1}{2}$ .

**EDINBURGH.**—Messrs. THOS. MILLER and SONS, stock and share brokers, Princes-street (July 18), write:—Home railways have declined since last report. Canadians and Americans have also been flat. Banks and insurance have been quiet. Since Wednesday last week Caledonian has gone from 106 $\frac{1}{2}$  to 105 $\frac{1}{2}$ ; Great North from 59 $\frac{1}{2}$  to 58; North British from 105 to 104. Grand Trunk from 29 $\frac{1}{2}$  to 29 $\frac{1}{2}$ . The Third Preference from 93 $\frac{1}{2}$  to 94 $\frac{1}{2}$ ; Canadiana from 14 $\frac{1}{2}$  to 14 $\frac{1}{2}$ ; New York, Pennsylvania, and Ohio from 47 $\frac{1}{2}$  to 48; Erie from 37 $\frac{1}{2}$  to 38 $\frac{1}{2}$ ; Readings from 29 $\frac{1}{2}$  to 29 $\frac{1}{2}$ . In mines, Arizona after falling from 63s. 6d. to 53s. 6d., have recovered to 60s. Marcellas have fallen from 94s. 6d. to 84s. on a rumour of difficulty in negotiating an extension of the lease. Steel Company have risen from 95 $\frac{1}{2}$  to 100 $\frac{1}{2}$ . Oil shares have been comparatively quiet; Burntishland, Midlothian, and Uphall are each from 2s. 6d. to 3s. 9d. 10s. 6d. Prairie Cattle

shares, first issue, have fallen from 10 $\frac{1}{2}$  to 9 $\frac{1}{2}$ ; the second from 10 $\frac{1}{2}$  to 10; the third from 10 $\frac{1}{2}$  to 10 $\frac{1}{2}$ . Swan Land and Cattle have risen from 6 $\frac{1}{2}$  to 6 $\frac{1}{2}$ .

## IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

**CORK.**—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (July 18), write:—Markets were quiet, but firm to-day. Great Southern remain 124, and Midlands were done at 90 $\frac{1}{2}$ . Bandon remain 85 $\frac{1}{2}$  to 86. No change in Macrombs. National Banks were done at 25 5-16ths, and Provincials at 33. Munsters changed hands at 7 to 7 1-16ths. No change in Hibernians. Alliance Gas were done at 19 $\frac{1}{2}$  to 19 1-16ths, and Dublin Trams at 9. Cork Steam Packets remain 12, and Lyons fully-paid shares at 6 $\frac{1}{2}$ . Dalys are 2 $\frac{1}{2}$ , and Cork Gas 7. Gresham Hotel remain 3 $\frac{1}{2}$ , and Brewery Debentures 5; Corporation Debenture Stock is 99 $\frac{1}{2}$ , and Brewery Debentures were on sale at 99 $\frac{1}{2}$ .

## Mining Correspondence.

## BRITISH MINES.

**BEDFORD UNITED.**—H. Trezise, July 17: North Lode: The lode in the 115 east is 2 ft. wide, composed of capel, mudiic, spar, and ore, it is worth 6d. and 2 tons of ore per fathom. The lode in the 103 west is 2 ft. 6 in. wide, and will produce 4 tons of ore per fathom and worth 12d. No. 1 lode in the back will yield 2 $\frac{1}{2}$  tons of ore and worth 8d. per fathom. No. 2 lode will produce 2 tons of ore and worth 6d. per fathom. The tribute pitches will produce 2 $\frac{1}{2}$  tons per fathom on an average, and worth 8d. per fathom. M'Callan's Shaft, Bridge Lode: The 62 east is not so good for ore; the lode is 2 ft. wide and worth 6d. and 1 $\frac{1}{2}$  ton of ore per fathom. The shoot of ore in the 62 east is separate and distinct from any other that we have seen on this lode. The lode in the 62 west is 2 ft. wide, composed of mudiic, capel, and some rich black ore of excellent quality, a very richly lode indeed. The 42 east is unproductive. The 30 east is also unproductive. The winze sinking below the 30 is worth 6d. per fathom, and will yield 1 $\frac{1}{2}$  ton of ore. No. 1 lode in the back of this level will produce 2 $\frac{1}{2}$  tons of ore and is worth 8d. per fathom. No. 2 lode in the back will produce 2 $\frac{1}{2}$  tons of ore, and worth 8d. No. 3 in the bottom is worth 8d. and 2 tons of ore per fathom. The lode in the winze, west of shaft, is 2 ft. wide, of a promising character, composed of peach, capel, mudiic, and an ore.

**BLUE HILLS.**—S. Bennetts, R. Harris, H. Gripe, July 18: The Pink lode in the 66 east end is 1 $\frac{1}{2}$  ft. wide, and worth 8d. per fathom. The 42 east end is not so productive as it was some time since, and worth only 4d. to 5d. per fathom. In the 22 cross-cut south the lode has not yet been reached.

**BRADA.**—R. Rowe, July 18: In the 4 ft. level, driving north, the lode has fully maintained its size and value since last report, and to-day is looking as well as we have ever seen it; lode fully 10 ft. wide, worth from 2 to 3 tons of ore per fathom. The lode in Prior's end, driving south, is to-day worth 1 ton of ore per fathom. We have this week started fresh stops in the roof of the 40 at 154 ft. levels, which are already producing good stuff for the dressing floors, this will forthwith increase our raisings, and as we expect to have our machinery additions finished during next week, we shall be in a position to start our dressing department in full swing.

**BWLCH UNITED.**—W. Northey, July 19: I have relet the 100 to be driven west by six men, at 6d. 15s. per fathom. The stratum is a compact blue clay-late rock highly mineralised. The lode is about 2 ft. wide, composed of friable quartz, blende, and lead ore, and from present appearance the lode will increase in width and value as we proceed westward. The machinery is in good order, and working well.

**CARNAVONSHIRE GREAT CONSOLS.**—J. Roberts, W. Darby, July 17: In the new discovery at the 48 (Cae-y-Groes) the ground continues to look very kindly, and has become wetter; and the small slide which we are driving on is looking better and the copper improving. There is no change to notice at the 20, Garnon's, since we reported last week.

**CARNARVONSHIRE GREAT CONSOLS.**—W. H. Borlase, July 19: There is no alteration in the new shaft sinking below the 24 since last report. I set on Saturday the remaining 4 fms. required to complete it to the 34 fm. level at 13s. per fathom, and if completed in five weeks a bonus of 3s. to be added. No other change to notice since last week.

**CARN CAMBORNE.**—W. C. Vivian, July 18: The following is my report on the several points of operation in this mine:—In the 105 cross-cut, south from the engine-shaft, we have advanced altogether 8 $\frac{1}{2}$  fathoms, thus having made good about two-thirds of the distance to the estimated position of the south lode. The granite rock through which we are passing continues of the same character as that in which we commenced the cross-cut. In the 95, east of sump, on south lode, we continue cutting through the lode in a north-easterly direction without having yet met with the north wall, although we have gone through the lode to the extent of 2 $\frac{1}{2}$  fathoms; this lode has been composed principally of chlorite or peach, carrying a little tin and arsenical pyrites, thus having the character and composition of the great tin-producing lodes of the neighbouring mines. In the last few feet driven the appearances have been presenting more favourable indications, there being a considerable increase in the proportion of arsenical pyrites. The rise in the back of the level last referred to, west of the sump, produces 2 tons of copper ore per fathom. In the 40, west of engine-shaft cross-cut, on the north lode, we are still driving west on the north wall, and carrying a width of about 4 ft. of the lode. The north wall thus far has been diverging from the south wall, so that the width of the lode must now be fully 12 ft.; the lode is also improving in character, and producing more copper ore as we advance. It seems to me that the appearance at this point warrant our expecting to make a valuable discovery on getting a little further west.

**CATHEDRAL CONSOLS.**—S. Davey, S. Davey, July 17: The water has been drained to the bottom of the 72, where the men are now engaged in clearing the accumulated stuff from the break in the 60. We hope to get the mine clear of water and stuff in the course of another week, and the men working in the bottom of the shaft and the two 72 fm. level east and west. The clearing up of the engine-shaft is progressing satisfactorily, and we can now see the windrose the old lift; by the end of next week we expect to see the bottom of the engine-shaft, and then to proceed with sinking the same. The several stops are still turning out their usual quantity of copper ore, and we have now three slides of work at surface, which we shall commence dressing in a few days. The 96 and 62 fm. will be set to clear to the ends of ground in the course of next week.

**COED-Y-FEDW AND PAUL-Y-BUARTH.**—R. Price, July 19: In the 90 level east the lode continues to open out to a very nice course of ore. In the west level it is magnificently exposed in the forenoon. In the back of this level I placed two men to drive, who in two days estimated fully 1 $\frac{1}{2}$  ton of splendid ore, and I expect to-morrow's work will let us have another  $\frac{1}{2}$  ton at least. Rowland's shaft is going down very satisfactorily, and in another three or four weeks it will be completed, when we shall be in a position to drive a cross-cut into the Cefnybuan lode, and I have not the least doubt about finding this rich—Trevathan's: The stopes is producing very good stuff for the washing floors; we are putting in air-pipes here, and then I believe we shall be able to return good quantities of lead.

**CWM DRYWYD AND BRYNARIAN (Brynarian).**—J. Davies, July 19: Joseph's Level: No change here since I last wrote. The stone is of an excellent character: Dry from water; rather tough for progress.—Penarn: The bed of quartz is dipping south. The lode is not looking so well. I have no doubt that the quartz has got an influence on it; it has disordered the lode.

**D'ERESBY MOUNTAIN.**—J. Roberts, W. Sandoe, July 18: During the past month several of the men have been employed in clearing away the debris and cutting down the shale part of the lode on the hanging side. In order to prepare for the better working of the ore part of the lode, we have been cutting down the shale, and enabled to cut down a large piece of good ore ground to the best possible advantage. This we value at 1 ton per fm. A few days since we put part of the men to sink and stopes in bottom of the No. 6, on the heading side of the lode; the length of the ore ground driven through here is about 25 yards, and will, no doubt, average for this length 1 $\frac{1}{2}$  ton of lead ore per fathom, and we purpose to sink and stopes the ore ground for the whole of this length. This shoot of ore has been worked away continuously from surface down to this level, having yielded—as we judge from the old workings—as well as from the new—large quantities of lead ore; and, as it lengths pretty considerably in depth, we think we cannot do better than follow the ore in depth. The stoping down from the bottom of the No. 5 proper underground did not reach the better lode below so soon as expected, and therefore we removed the men to the roof of the No. 5 intermediate level, and here we have a very nice lode indeed, making good ore going up, and to all appearance lengthening south; this lode is now worth fully 2 tons of lead ore per fm.

**DEVON FRIENDSHIP.**—P. R. W. Daw, W. Gill, July 19: The 42 fm. end east and west of Bennett's shaft continues to look well for arsenical mudiic. Floyd's stopes, in the back of the 30 fm. level west, is producing about 1 ton of copper and 5 tons of arsenical mudiic per fathom. The winze in the bottom of this level is worth about 8d. per fathom for arsenical mudiic; some very fine stones of copper ore was broken in this winze yesterday.—Surface Operations: All the machinery on the mine is working well.

**DEVON GREAT CONSOLS.**—I. Richards, Wheal Emma Inclined Shaft: In Glanfield's rise, in the back of the 137 east, the lode is from 5 to 6 ft. wide, and worth 1 ton of copper ore and 3 tons of mudiic per fathom.—New Shaft—New South Lode: In the 115 east the lode is 4 ft. wide, a promising character, and contains some good quality copper ore and 2 tons of mudiic per fathom.—Railway Shaft: In the 205 west, on the south part of the lode, the drive is being carried by the side of the lode for more speedy progress. In Southcombe's winze, sinking below the 190 west, on the south part of the lode, the lode is 4 $\frac{1}{2}$  ft. wide, composed of capel and quartz, with peach, mudiic, and some good quality copper ore. In the 160 west, on the south part of the lode, the lode is 4 ft. wide, yielding 1 ton of copper ore and 2 tons of mudiic per fathom.—Watson's: In the 20, east of western shaft, the lode is 3 ft. wide, composed of capel, quartz, peach, a little good quality copper ore, and 2 tons of mudiic per fathom. There is no important alterations at any of the other points of operation throughout the mine.

**DEVON GREAT UNITED.**—Isaac Richards, July 18: In the 120, east of Willeford's shaft, the lode is 3 ft. wide, composed of strong capel and quartz, with peach, mudiic, and a little copper ore. The distance driven during the past week is 3 ft. 6 in. In the 120, west of Willeford's shaft, the men have been engaged during the past week taking down the country standing on the north side of the level for interference with the north part of the lode, which proves to be about 1 ft. wide, consisting principally of capel, with mudiic and a little copper ore. There is no alteration to notice at any other part of the mine.

**EAST CARADON.**—Wm. George, July 18: The counter lode in the 150 east is 3 $\frac{1}{2}$  ft. wide, composed of quartz, peach, and mudiic, with good stones of copper ore. The same remarks will apply to the winze now sinking below the 130, each point being favourable for progress. We have resumed the 130 cross-cut south, but there is no change there or in any other parts to notice since the general meeting.

**EAST WHEAL ROSE.**—Thomas Doldge, Richd. Gill, July 17: Penrose's Engine-Shaft: Since we last advised you we have put the 20 and 1-in. lift, which we had dropped below the 40, to work, and we are pleased to say that the water is now drained 5 fms. under the 40, and we hope by to-morrow morning to see the 50, at Foster's shaft. We beg to point out that we shall drain this last 10 fms. in something less than a fortnight. We are raising, diving, and fixing ladder-rod between the adit and the 40 at this (Penrose's) shaft. This could only be done after fixing the 40 pole, seeing the pitwork before fixed prevented its being done. In clearing the 40 from Foster's shaft south we have effected a communication with Robert's shaft. We shall continue to push the clearing of this level south till we reach the end, when we will further advise you. In the north end we are expecting every day to communicate with the engine-shaft, when the mine will be thoroughly ventilated to this depth.—Robert's Shaft: We have to-day started to put in skip-rod, which we shall push forward with all speed, so as to get this shaft ready for drawing by the time the end is reached. The pitches are much the same as when last reported on.—North Wheel Rose: The shears are completed and erected in position, and the shaftmen have resumed the clearing of the engine shaft. The engineers are still pushing on with the steam-pipes of both the 103 and 25-in. engines. All other work is progressing satisfactorily.

**GAWTON.**—George Rowe, George Rowe, jun., July 14: The lode in the 117 east is carried 7 ft. wide, yielding 6 tons of sulphur and arsenical mudiic per fathom. The lode in the 117 is yielding 10 tons of sulphur and arsenical mudiic stuff per fathom. The lode in the No. 1, No. 2, and No. 3 stops in the back of the 117 is yielding 6, 7, and 10 tons of mudiic, mixed with copper ore per fathom. The lode in the stopes in the back of the same level, east of rise, is yielding 14 tons of mudiic per fathom, with occasional stones of copper ore. The lode in the stopes in the bottom of the 105, both east and west of winze, is yielding 6 and 10 tons of mudiic per fathom respectively. The lode in the stopes in the back of the 70, Nos. 1 and 2, are yielding respectively 7 and 3 tons of mudiic-stuff per fathom.

**GLASGOW CARADON CONSOLS.**—W. Taylor, W. J. Taylor, July 16: We are sinking the engine-shaft below the 114 by six men, and as soon as they can get to work we purpose putting on nine men to push it on as fast as possible.—South Lode: In the 114 east we have just come up to a cross-course. We hope to find an improved lode on the other side.—Harvey's Lode: The 114 east at present not of much value; the south branch not come into the lode. This level west worth 5d. per fathom. We are pushing on to the junction of the branches, when we expect an improved lode. We have four stopes in the back of this level, varying in value from 8d. to 10d. per fathom. 90 west worth 7d. to 8d. per fathom. 90 west on north lode worth 5d. per fathom. We have a cross-pitch in this end, and are improving now the lode for the present. We hope to get the same productive lode on the other side as we have had on this. We have no change to notice in the tribute pitches.

**GOODEVERE.**—R. Knott, July 17: The adit referred to in my reports of late has now reached a point where the lode is 9 ft. wide, of saving work for the stamps. The tramroad being also laid down, I now look forward to keeping the stamps fully supplied; and furthermore believe, with a continuance of the present character of the lode, this part of the mine will pay the cost of working. There is no alteration in the adit end east from Higher shaft since my last report.

**GREAT HOLWAY.**—W. T. Harris, July 19: Roskell's Shaft: In the 95 north the ground maintains its improved character, and fair progress is being made; occasional stones of rich lead are being extracted from the joints, and throughout indications are very promising. In the 83 west the lode is 1 ft. wide, containing an increase of blende impregnated with lead; the ground also is becoming easier for driving, and in composition similar to what can be seen in the level above; water issues freely from the forebrest.—Office Shaft: In the 60 west in the cross-cut south the ground is less favourable for going through, but congenial for producing ore, therefore our intention in intersecting the lode I anticipate a good discovery. I have about 3 fms. to accomplish. No particular change in the stopes, containing lead in paying quantities.—Brammoch Shaft: The pitch in bottom of the 60 east is yielding lead ore and blende in remunerative quantities, and prospects improving; ventilation is now good, and great results are daily expected.—Level Engine shaft: In the 80 east the lode is 3 ft. wide, principally blende and stones of lead, very promising for a great improvement. In the 60 east the ground is favourable for progress, and the lode, which is 1 ft. wide, improving for lead; this is an encouraging point, and in appearance exhibits the commencement of a fresh run of ore; this is important, and is now producing 15 cwt. of lead ore per fathom. A stopes in bottom of this level is producing 1 $\frac{1}{2}$  ton of lead and 1 $\frac{1}{2}$  ton of blende per fathom.

Tribute: No. 1 pitch in the back of the 60 is a splendid run of ore; worth fully 4 $\frac{1}{2}$

The winze below the 85 south is down 13 fms. 3 ft. 10 in. wide, with stones of ore, but not to value. The 85 south is in a lode 3 ft. wide of quartz, with stones of ore of a promising character. The same level, going north, is in a lode 4 ft. wide, composed of quartz and calc spar, but not to value. No. 1 stope, in the 85 south, is worth 25 cwt. per fathom. The 70, south of Wilson's shaft, is worth 15 fms.; lode 2½ ft. wide, but at present not to value. Wilson's shaft, below the 70, is down about 10 fms., and is now nearly to the north end of the main run of ore; lode in bottom of shaft 4½ ft. wide, and worth 2½ tons per fathom. A stope below the 70, north of Wilson's winze, is worth 4½ tons per fathom. A stope in the back of the 70, south of shaft, at 10s. per ton, is worth 6½ tons per fathom. A stope above said north of shaft is worth 4½ tons per fathom. A stope below the 41, south of Grier's winze, is worth 5 tons per fathom. The stope below the same level, north of Wilson's winze, is worth 6 tons per fathom. No. 1 stope, above the 41, north of shaft, is worth 35 cwt. per fm.; No. 2 north is worth 30 cwt. per fathom. Grier's adit is driven south of Wilson's shaft altogether 66 fms. 6 in.; lode in present end 8 ft. wide, worth 3½ tons of lead ore per fathom. The country round here is all that could be desired, and with such a wide ore lode, all in whole ground, we look upon this point as one of great moment to the company.—Ralph Jones: The 10, south of Wilson's shaft, is opening a tributary ground.—Jeffrey's Lode: The 20, going north of Raik shaft, is worth 30 cwt. per fathom. The stope above the said level is worth 25 cwt. per fathom. We have four new buddles started on slime-floors, and the carpenters are now fixing the tables or frames with classifiers for the finer ore-stuff. We have masons building kilns at Wilson's shaft for the better separation of the orestuff from the dross, and we hope soon to be in a first-rate position in regard to the dressing of the produce of the mines.

LOVELL.—J. Prisk, July 18: The lode in the shaft sinking below the 14 is 8 ft. wide, all stamping work, and improving as we go down the lode is 6 ft. wide, lode is 7 ft. wide, and all stamping work; and in the west the lode is 6 ft. wide, looking very promising. The lode in the air-shaft, 11 fms. west of engine-shaft, is 5 ft. wide, all stamping work, although only 8 fms. from surface; a little improvement in the quality of the lode, which we are sure to have as we get deeper, will place the mine in a good position once more. It is seldom such a large and fine lode is to be met with at only 14 fms. from surface.

MARK VALLEY.—W. George, July 18: Since reporting for the general meeting the 80 cross-cut south as well as the 90 north have both been driven at a satisfactory rate, but nothing further discovered. The stope and pitches continue without change.—Wheeler's Lode: In the 15 east we have got the lode east of the cross-course about 5 ft. wide, where it is producing good stamping work worth 30 lbs. of tin to the ton of stuff, and although this is not equal to what it made before the intersection, we think it will improve as the driftage is extended. The western end as well as the rise in back of this level are of the same value as last reported. The stamps continue to work very satisfactorily, and the dressing-floors are being extended as fast as the nature of the work will admit of.

MELLANBY.—J. Gilbert, July 18: The 30 cross-cut, south of Gundry's shaft, was driven last month 1 fm. 5 ft. 9 in.; we are still meeting with small veins of munda and lead, and the ground is easy for driving, and looking very congenial for mineral. The 70 cross-cut, north of the main lode, east of Gundry's shaft, was driven 1 fm. 4 ft. 9 in.; the ground is mineralised, and gradually getting wetter, and the men are making good progress in driving. The 100, west of shaft, on the main lode, was driven 2 fms.; the lode is 5 ft. wide, and yielding 2½ tons of ore per fathom; this end is just under the winze in the 90, and we shall begin to rise very soon. The 110, driving west of shaft, on south part of lode, was driven 4 ft. 9 in.; the lode is 5 ft. wide, yielding 1 ton of copper ore per fathom, and is also worth 1 fm. 3 ft. 10 in. The 120, east of shaft, on the main lode, was driven 1 fm. 3 ft. 10 in.; the lode is 4 ft. wide, yielding 1½ tons of copper ore per fathom, and producing some very rich stones of tin. The 110, east of shaft, on the main lode, was driven 3 ft. 10 in.; the lode is 4 ft. wide, yielding 2 tons of ore per fathom, and looking very promising, but rather spare for driving. The 120, west of shaft, on the main lode, was driven 3 fms. 5 ft. 10 in.; the lode is 3½ ft. wide, yielding 1½ tons of copper ore per fathom, and letting out an increased quantity of water. The winze in the bottom of the 60, on the south part of lode, was sunk 1 fm. 2 ft.; the lode is 4 ft. wide, yielding 2 tons of ore per fathom, and is also worth 1 fm. 3 ft. 10 in. The 70, east of shaft, on the main lode, was driven 1 fm. 3 ft. 10 in.; the lode is 5 ft. wide, and yielding 4 tons of ore per fathom. The rise in the back of the 110, at Gundry's shaft, was put up 1 fm. 5 ft. 3 in.; the lode is 4 ft. wide, yielding 1½ tons of copper ore per fathom, and some good stones of tin. The 90, east on the old engine-shaft, was driven 4 ft. 6 in.; lode 1 ft. wide, yielding occasional stones of copper ore. The lode in the winze in bottom of old engine-shaft is 5 ft. wide, yielding 3½ tons of copper ore per fathom, and worth 8½ per fathom for tin. We have computed this month's sampling to be 511 tons of copper ore.

MID-DEVON COPPER.—James Neill, July 14: A Shaft: Water in fork to bottom of 80; machinery working smoothly and well.—O Shaft: The 45 stope, worked by two men, is without change, except that the yield of ore for last few days has not been so good. I intend to suspend this point for a time, and next week remove the two men to the 50 on some deposits of ore ground passed through in driving which are likely to turn out well. I still believe that there are larger deposits of ore in the vicinity of our working in the 45, which some future time I hope to give another trial. The 50 east from cross-cut north, worked by rock-drills and three relays of men has been driven 7 ft.; the stratum is considerably harder, consequently progress has been retarded. Compressor was stopped one day to pack stuffing-box and piston. I consider this to be only a hard bar of rock similar to what we have before met with, and expect soon to get through it with the drill. The yield of ore has also fallen off, which is invariably the case when the strata becomes harder, but have no doubt that on the other side of the bar we shall find it again improved in the yield of ore. Pumping wheel alterations are being pushed forward. Ore raised during week 18 tons.

MOUNTS BAY CONSOLS.—W. Argall, J. James, J. Rowe, and W. H. Argall, July 14: Sydney Cove: During the past month we have sunk the shaft on No. 1 lode 3 fms. 3 ft.; the lode at present is split with a horse of kilaas between, and worth about 2½ tons per fm. In the rise against the shaft no lode has been taken down in the past week. We have set 10 tribute pitches on this lode at 13s. 4d. in 11. The cross-cut south from the new engine-shaft at the 10 has been driven 1 fm.; the lode has been reset to six men, at 2½ s. per fathom, and has been short of the cutting of the No. 2 lode. The 50 east from cross-cut north has intersected No. 6 lode, and we are driving on that with four men, at 2½ s. per fm. to cut No. 4 lode. The level driving on No. 2 lode at the new engine-shaft, by two men, at 2½ s. 6d. per fathom; the lode is larger, and producing occasional stones of tin. We have three tribute pitches east of this working, at 13s. 4d. in 11. On the Nos. 4, 5, and 7 lodes we have four tribute pitches working, at 13s. 4d. in 11. We are still deficient in water for dressing purposes.—Pembro: We have dropped about 9 fms. below the 50 fm. level, and cleared near 2 fms. of stuff in the shaft, so that we are expecting to see the back of the 80 fm. level, and soon to be the bottom of the mine. Men are also engaged putting in air machine and pipes in the 50, and in a cross-cut from which point we have a great deal of water.

NEW CARADON.—N. Richards, July 18: As stated last week, the men are busy engaged preparing for the erection of the water-wheel. We have also a full set of men removing the debris from the top of the shaft, which appears to be much crushed, preparatory to collaring and securing the same, and no time will be lost in reaching the adit level as early as possible.

NEW KITTY.—Wm. Vivian, July 19: There is no change to notice in the mine since my last report.

NEW TERRAS.—J. D. Fraser, T. Edwards, July 19: We have completed the erection of a battery of 16 heads of stamps, and are now waiting the carpenter to put in the passes. The tramroad from the stone-breaking house to the stamps has been laid, and we are clear for boulders and frames for dressing-floors. The work in the 18 cross-cut has so much increased that we are unable to proceed with that work until our pumping is fixed, and we hope to commence doing so in a few days. The waste water coming from the lode appears well for its continuance; it is, without doubt, the champion lode of this district.

NEW WEST CARADON.—N. Richards, July 18: A stope in the back of the 30 on the main lode will yield 1 ton of copper ore per fathom. A stope in the bottom of this level will yield about 1 ton of ore per fathom. Clyma's lode in the 35 driving west of cross-course is producing saving work for copper. No. 4 lode on which we are driving east at this level is slightly improved in appearance producing good stones of ore. No change to notice in the cross-cut driving south at this level.

NORTH GREEN HURTH.—J. Polglase, July 12: The vein in the deep adit level is about 2 ft. wide, a kindly-looking vein, but without ore. No change in the rise in the south level from deep adit level. We shall commence driving the level in the new property next week. Good stones of solid lead were obtained from the Crookburn stream in the clay this week.

NORTH HERODSFOT.—T. Trelease, July 19: We have taken down a piece of lode in the stope in the back of the 117; it is not quite so wide as it was, but it continues to yield 12 cwt. of lead ore per fathom. In the rise in the 117 is also worth 12 cwt. of ore for the length of the rise. We have more munda in the 117 end, and have also more water coming out of the end, and this increase of water in the end has drained the stope and a place or two in the side of the level. I think this proves that we have a porous lode near at hand. The lode in the 90 is about 1 ft. 6 in. wide, and producing stones of ore occasionally. We have commenced to dress another parcel of ore.

NORTH PENRITH.—S. Davey, July 19: We have cut a branch in the 150 cross-cut bearing some good stones of tin. We shall see more in a few days.

NORTH TREKERRY.—Pryor and Son, July 19: On Saturday last the following bargains were set:—To drive west at the deep adit level cross-cut, north of Scorer Consols engine-shaft, on No. 1 tin lode, by six men and one labourer, at 4½ s. per fathom; the lode in the end has varied a little in size since last report, and is worth about 20c. per fathom for tin. We also set to four men to drive east of cross-cut, on this lode, at 4½ s. per fathom, where the lode is quite 3 ft. wide, and worth for tin 25c. per fathom. The carpenters have completed the wood-house for storing, and making marketable the tinstone, and the floor of same is being paved, and will be complete by Friday. The arrival of the rock-drilling machinery we are daily expecting.

OKEL TOR.—H. Bulford, J. Rodda, July 19: The new eastern shaftmen are making very good progress in sinking below the 80. The lode in the 80 end east is producing saving work for munda, and good quality tinstuff for the stamps. The two stopes in the back of this are yielding fair quality tinstuff, and 10 tons of arsenic ore each per fathom. The 65 end, west of Gerry's cross-cut, is not producing sufficient ore at present to value, but the lode is large, and has a kindly appearance. The stope in the back of this level is producing 12 tons of arsenic ore per fathom, and good quality tinstuff. The stope in the western part of the mine are producing on the average 11 tons of arsenic ore per fathom.

PARTY COPPER CORPORATION.—T. Mitchell, July 18: The 90, driving east of cross-cut under the open-cut, is improving in appearance and showing stronger indication for copper; good stones of copper ore are occasionally being met with. We also find small patches of copper ore in the driving west of cross-cut at the 90, and the ground is very similar to that in which large quantities of copper were formerly found in the shallow workings. The precipitation pits are pretty well clogged with old iron, and some of the pits are doing very well, but the west pits, owing to the dry weather, are getting short of water; some good heavy rain would improve their condition. One of our plunger cases at Gwenn's engine-shaft suddenly broke out this week, and we were obliged to change it; fortunately we had one on hand. We had also a newly stocked the plunger pole belonging to this place, which work has just been completed, and both plunger and case are again in good working condition.

PENHALLS.—S. Bennetts, J. Goyne, July 18: The 80 west end is without much change. The 70 east end contains a small good leader of tinstuff, worth

7½ per fathom. The 60 east end on south section of the lode is producing tinstuff of about 5c. per fathom. In the 60 cross-cut north no further lode has been found as yet. The lode in the 50, south of the engine-shaft, is worth about 5c. per fathom. The Baldin lode in the 42 west end is producing some little tinstuff, but not of much value.

PHENIX AND WEST PHENIX.—John Truscott, July 19: Setting Report: Old Sump Shaft: The 130 to drive west, by two men, at 8½ s. per fathom, lode producing a little tin, but not to value. To stop the back of this level, by four men, at 3½ s. per fathom, worth per fathom 14c. The 120 to drive west, by two men, at 4½ s. per fathom, this end is at present in the gossan part of the lode, but looks promising for an early improvement. No. 1 stope in back of this level, by six men, at 2½ s. per fathom, worth per fathom 16c. No. 2 stope in back of this level, by four men, at 2½ s. per fathom, worth per fathom 15c. To stop the back of the 110, by four men, at 4½ s. per fathom, lode worth per fathom 20c. To stop the back of the 100, by four men, at 4½ s. per fathom, lode worth per fathom 12c. To rise in the back of the 80 close to the present end, in granite, by four men at 6½ s. per fathom, for ventilation. No. 1 stope in back of this level, by six men, at 2½ s. per fathom, worth per fathom 16c. No. 2 stope in back of this level, by six men, at 2½ s. per fathom, worth per fathom 20c. The 60 to drive west, by two men, at 12c. per fathom, lode worth for part carried, 6 ft. 15c. per fathom. No. 1 stope in back of this level, by six men, at 3½ s. per fathom, lode worth per fathom 17c. No. 2 stope in back of this level, by four men, at 2½ s. per fathom, worth per fathom 15c. No. 3 stope in back of this level, by four men, at 3½ s. per fathom, worth per fathom 25c. The 50 to drive west, by four men, at 9½ s. per fathom, lode worth for part carried, 6 ft., 10c. per fathom. To rise in back of this level, by six men, at 6½ s. per fathom, in granite, for the purpose of communicating with the workings at Hamilton's shaft. To stop the back of the 30, by four men, at 3½ s. per fathom, worth per fathom 8c. To stop the back of the 20, by four men, at 3½ s. per fathom, worth per fathom 15c. Western Mine: New Engine-Shaft: The 50 to drive east, by six men, at 5½ s. per fathom, lode unproductive. The 50 to drive west, by four men, at 14c. per fathom, lode worth for part carried, 6 ft., 17c. per fathom. No. 1 stope in the back of this level, by four men, at 4½ s. per fathom, lode worth 13c. per fathom. No. 2 stope in the back of this level, by four men, at 4½ s. per fathom, worth per fathom 12c. No. 3 stope in the back of this level by four men, at 6½ s. per fathom, worth per fathom 3c. The 40 to drive west by four men, at 14c. per fathom, worth per fathom 12c. No. 1 stope in back of this level by four men, at 4½ s. per fathom, worth per fathom 10c. No. 2 stope in back of this level, by six men, at 4½ s. per fathom, worth per fathom 14c. No. 3 stope in back of this level, by three men, at 3½ s. per fathom, worth per fathom 10c.—Stowe's Shaft: The 70 to drive east, by four men, at 12c. per fathom, lode worth per fathom 6c. No. 1 stope in back of the 60, by four men, at 2½ s. per fathom, worth per fathom 35c. No. 2 stope in back of this level, by five men, at 3½ s. per fathom, worth per fathom 35c. Four tribute pitches were set at tributes varying from 10s. to 13s. 4d. in 11. for tin and copper.

POLCREN.—H. Martin, July 19: On Saturday last we set the following bargains:—Engine-shaft: The 10 to drive east, by six men, at 7½ s. per fm. The 17 south cross-cut men are cutting ground for feni-off hole at adit level (Highburrow shaft); we shall complete this in a fortnight. Highburrow shaft to sink under the 17 to complete the 13 fathoms, by nine men and three boys, at 12c. per fathom. The tributers are preparing a parcel of tinstuff for sale. The prospects are much the same as reported for the general meeting.

POLROSE.—W. Bennetts, July 18: We found it necessary to cleanse the second boiler last week, and we had also to stop the engine to repair its valve. Owing to these delays, the above rise, in the 110, east of shaft, is not yet in the ground, which I hope will be some time to-morrow, the men will resume cutting ground for cistern.

ROMAN GRAVELS.—Arthur Waters and Son, July 19: There is no change worthy of remark in either the 125 north or south of new engine-shaft since our last full report. The 110 north is yielding good stones of ore, and looks likely to improve shortly. The 110 south is suspended, in a lode worth 2½ tons of lead ore per fm., as soon as the rise which is going up just behind the said end, in a lode 6 ft. wide, worth 2½ tons per fm. The winze below the 95 fm. level, going to meet the above rise, is in a lode, worth 1 ton per fm. The 95 south is in a lode 4 ft. wide, worth 1 ton per fm. The 80 south is worth 2 tons per fathom. The winze below this level, down 7 fms., is worth 4½ tons per fm. The winze below the 65, on the east portion of the lode, is worth 2 tons per fm. The stones throughout the mine are quite up to the values given in late reports.

RUSSELL UNITED.—John Bray, July 19: There is no improvement to notice in the lode at Matthew's shaft this week. At Stephen's shaft the men are cutting ground for bob-plat in order to break the underlay for our new line of rods to work the plunger-lift. I hope we shall get this work all completed in about a fortnight.

SOFTIDGE COPPER.—John Axford, July 19: The 40 cross-cut, going towards Great North tin lode, has been cleared and secured since last report 5 fms., and the 50 cross-cut to intersect the lode is driven 8 fms. 2 ft.

SOUTH CARADON.—W. George, July 18: Setting Report: Rule's Shaft: We expect to complete cutting the ground required for plat, cistern, and fixing the plunger at the 210 by the end of this week, when the present three drawing lifts will be removed and a 30 fathom plunger-lift fixed in their stead. To drive the 210 east, on Hamilton's lode, with the boring machine, by six men. The ground is very favorable, and the lode is rather disordered at present, a change such as this lode appears to be subject.—Kittow's Shaft: At the 180 east part of the lode we have been driving on being small and not corresponding with that in the level over, we are now driving a trial cross-cut south by nine men with the boring machine, where we believe a more productive part will be met with. To drive the 160 east by six men at 6½ s. This end continues to lay open profitable ground, and will yield full 2 tons of ore per fathom; favourable for driving. A winze has been commenced from the bottom in this level, set to six men at 12c. lode yielding 1½ ton of ore per fathom. To stop the back of the 160 by four men at 3½ s., where the lode will yield 2 tons of ore per fm. To drive the 150 east by six men at 11c. The ground here is somewhat harder than at the last setting, but the lode continues to yield 1½ ton of ore per fm. To stop the bottom of this level by four men at 2½ s., yielding full 2½ tons of ore per fathom. To drive the 120 east by four men at 16c., which is yielding 1 ton of ore per fathom. To sink a winze below this level by four men at 12c. The lode continues to yield 1 ton of ore per fathom.

To drive east from a rise in the back of the 110, by four men, at 7½ s. per fm. To drive the 110, by four men, at 5½ s. per fathom, yielding 1½ ton of ore per fathom. This has been commenced about 15 fms. east, and is intended to communicate with the above level, which will lay open a run of tribute ground and give good ventilation.—Caunter Lode: There are eight men employed in stopping the bottom of the 110 fm. level for bringing the water from Kittow's to Holman's engine; set respectively at 4½ and 2½ s. per running fathom. We have also working in different parts of the mine 47 pitches, by 94 men, at tributes varying from 10s. to 13s. 4d. in 11.

SOUTH CONDRURROW.—Wm. Rich, July 18: There is nothing very special in the mine to report to-day, other than that the lode in the 70 end, east of King's, is improving. We will send you a full report next week.

SOUTH DARREN.—Henry James, July 19: We have a good lode in the 130 east, worth 1½ ton silver-lead ore per fathom. In the same level west the fore-bank is intersected a little with silver-lead throughout, but as yet there is no solid rib of ore. The 120 east is looking well; the lode is wide and worth 2½ tons silver-lead ore per fathom. In the eastern end the lode does not look so good, but is worth 1 ton silver-lead ore per fathom. There is no material change at any other point to notice. This week being our setting week a full report will be sent to you next week. The 45 tons silver-lead ore sold on the 13th inst. realised 585s. 2s. 6d.

SOUTH DEVON UNITED.—Wm. Hooper, July 19: Setting Report: The 110, east of Brook engine-shaft, has been driven during the past month 3 fms. 2 ft. 11 in.; reset to six men, at 10c. per fathom. The end is without any particular change since last reported on, the lode being from 4 to 5 ft. wide, and worth 12c. per fathom. The 65 end, east of this level, is reset as follows:—No. 1, to six men, at 5½ s. per fathom; the lode is 5 to 6 ft. wide, worth 10c. per fathom. No. 2 ditto to six men, at 5½ s. per fathom; the lode is 5 ft. wide, worth 10c. per fathom. No. 3 ditto, to two men, at 2½ s. per fathom; the lode is 3 ft. wide, worth 5c. per fathom. The rise against Martin's shaft has been risen during the past month 2 fms. 4 in.; reset to four men, at 7½ s. per fathom. The lode is 4 ft. wide, worth 10c. per fathom. We hope to make a communication here with Martin's shaft by the end of the month.

STONE in the back of the 110, west of the 60, is set to six men at 6½ s. per fathom; the lode is 5 ft. wide, with a value of 9c. per fathom.—Martin's shaft has been sunk below the 100 2 fms. 1 ft. 6 in. during the past month, the men having taken it to communicate with the rise, consequently there is no alteration in the price; the lode is from 4 to 5 ft. wide, worth 7c. per fathom. [copy illegible] Sump shaft has been driven during the past month 1 ft. 2 ft. 6 in., reset to two men at 4½ s. per fathom; the lode is 4 ft. wide, and of much the same appearance as for some time past. All the surface ground is at present dry, and all is being done to get as much ore as possible for the next sampling.

TANKERVILLE.—Arthur Waters and Son, July 19: There is no new feature in either of the mines since our report of the 17th inst. All the pumping engines and pitwork throughout are doing good duty, and the mines are in fork to bottom.

TRESAVEAN.—J. Prisk, W. Edwards, July 16: Engine Shaft: The water is drained about 2 fms. below the 100, and the men are engaged in cutting bearers in which to fix the hoovers previous to the drop-lift being sent to the 112. In the 100, west of engine-shaft, we have a slight choke, preventing our going west towards old east shaft; this will be cleared in a few days, and the level will be explored as far as William's.—William's Shaft: This shaft is secured at the 60, and the ladderway will be put to the 75 forthwith, where we expect to have some good copper pitches. The copper lode in the 27 is looking fairly well, being worked by four men, at 10s. in 11. We have several other pitches applied for in this part of the mine, which we shall set as soon as possible.—Gosch's Lode: The lode in the deep end, east of cross-cut, is 18 in. wide, and improved very much in appearance; the ground is also looking better, and more congenial for the production of mineral. Surface: Good progress is being made in building the house for the reception of the 24 in. engine at William's, and every effort will be made to have the same completed, and the engine fixed as soon as possible. The 90-in. engine and all other machinery continue to work well.

WEST CARADON.—N. Richards, July 19: We have suspended the rise in the back of the 55, on Taylor's lode, and placed the same spare of men to rise in the back of this level, on Vivian's north lode, which will yield from 1 to 1½ ton of ore per fathom. Two stopes in the back of this level, on this lode, will yield together over 2 tons of ore per fathom. Gilpin's lode, at this level, driving west of main cross-course, is still in disordered ground, but will yield full 1 ton of ore per fathom. In a former report I stated that we had commenced a mid-way level between the 17 and adit levels on this lode; although the lode was then small and poor I considered, looking at the run of ore ground, that we should not have far to drive to reach the next shoot of ore. In this our opinion seems to be verified, as the lode is now worth 10c. per fathom, with every appeal of further improvement. This lode in the adit level, driving west of Hallett's cross-course, will yield 1 ton of ore per fathom. The winze sinking below this level is yielding stones of ore. Three stopes in the back of this level will yield together about 3 tons of ore per fathom. The clearing and securing of the 50 cross-cut, south of the main lode, is going on as usual.

WEST CREBOR.—J. Andrews, July 18: The lode in the engine-shaft sinking below the 62 is 3 ft. wide, composed of quartz, apatite, munda, and yielding good stones of copper ore. The 63 end is still driving by the side of the lode, and shall continue to do so for a fortnight longer, when we shall cut through it so as to ascertain its size and value.

WEST DEVON GREAT CONSOLS.—George Rowe, July 18: The lode in the end of the 50, west of the engine-shaft, is improving in size, producing very strong arsenical munda, impregnated with copper ore, altogether of a very kindly appearance. The lode in the 35, west of shaft, is yielding arsenical munda, with good stones of ore, and the ground good for progress.

WEST GODOLPHIN.—J. Hodge, Francis Hodge: The shaftmen are engaged putting in shaft-piece, and sending down pent-house, and are making fair progress with their work. The vein in the 80 south-east on the caunter is going forward in a nice looking lode, and produces good stones of tin. (In the 80, west on Pink, should have read, "south-east on the caunter," in last week's report.) There is no change to report in the other bargains. The machinery is kept in good condition and working well.

WEST GONAMENA.—N. Richards, July 18: The usual progress is being made in driving the adit level, west of shaft, on the main lode, which maintains its size and promising appearance. There is also much water issuing from the lode, and which we are pleased to see.

WEST KITTY.—W. Vivian, July 19: There is no change to notice in the mine since last week. A full report will be given at the meeting of shareholders next week.

WEST PHENIX.—R. Ghayas, July 19: Our shaftmen are making good progress in driving east and west at the 52, the part of the lode carried is of a very congenial character; we intend, after driving further both east and west, to cross-cut the whole width of lode, when we shall be able to give its value. At the 32 the men are still making good progress. Should this channel of ground continue we shall soon reach Vatcher's shaft; this being done we shall have a good piece of paying ground laid open; the part of lode carried, which is 3 ft. wide, is producing good stones of tin; we also intend cross-cutting the whole width of lode shortly, when we have reason to believe we shall be able to report very favourably thereon.

WEST VOR.—S. Harris, July 19: I have just come from underground, and am pleased to say the lode in the adit level is fully 4 ft. wide, containing tin throughout with munda and a little copper, and at the depth a more promising lode cannot be seen in the country. I am most anxious to erect the necessary machinery to enable us to sink the mine, say, 40 fms. below the adit to the junction of this lode (the Sizen) with the Great Vor main lode, a point that every one is sanguine of great success, as the same occurred in the adjoining mine Great Wheel Vor—the characteristics in every way being the same.

WEST WHEAT.—W. T. White, July 18: We are pleased to say the improvement in the lode in the 48, west of cross-course, still continues, being now about 15 fathoms west of the cross-course; it is getting out of its influence, and seeing this improvement takes place this distance off the cross-course we have a stronger opinion of its durability, and we firmly believe we shall yet open up a good and profitable mine in this direction. Our shaftmen we calculate will again sink 2 fathoms in the engine-shaft this month. Saturday next being our pay and setting-day a full setting report will be sent out next week.

WEST WHEAT FOLGUS.—John Gilbert, July 19: Richard's Shaft: In the 15 fm. level, driving west of shaft, the lode is 2½ ft. wide, yielding stones of munda and copper ore, and letting out a little more water than the 10 fm. level, and other indications we think it is getting very near the cross-course. The lode in the winze sinking below the 105 fm. level, west of shaft, is 6 ft. wide, yielding 2 tons of ore per fathom, and looking a little more promising; but the ground is rather spare for sinking. In the 85 fm. level, driving west of shaft, the lode is 3½ ft. wide, composed of spar, mixed with munda and copper, but not sufficient to value, and still letting out a very large stream of water. The 100, 1 stope in the bottom of the 105, west of shaft, is 6 ft. wide, and yielding 3½ tons of ore per fathom; worth 20c. per fathom. The lode in No. 2 stope, in the bottom of the 105, west of shaft, is 6 ft. wide, and yielding 4 tons of ore per fathom; worth 22c. per fathom. We have set the above stope on a tribute, to 12 men, at 5s. 3d. in 11, believing we shall get better results than by stopping the ground, as heretofore, on tutwork. We also set six other pitches to 14 men, at an average tribute of 9s. 9d. in 11. Our sampling on Tuesday last, was computed, 1 4 tons of copper ore.

WHEAT GRENVILLE.—T. Hodge, July 19: In the 205 north cross-cut we are in a lode about 4 ft. wide; it produces low price stamping work. In the 190 east end of the lode, the lode is 4 ft. wide, and is not far enough to catch the run of tin ground gone down in the level above. This was below the 173 just before the said end is down 4 ft., the lode in which is worth 15c. per fm. We have suspended said winze for a few days, and placed the men to drive south to prove the lode in this direction; the lode here is worth 18c. per fathom. The 178 end is worth 14c. per fathom. The 165 east end is worth 10c. per fathom. The 150 east end is worth 10c. per fathom. The 130 west end is worth 10c. per fathom. The 120 west end is worth 10c. per fathom. No other change.

WHEAT HONY AND TRELAUNY.—Vin. Derry, John Pearce, Hubert Lanyon, July 18: A splendid lode has been cut to-day, the eastern cross-cut from the 158. It has been cut into about 10 in., but not seen any eastern vein. It is composed of a beautiful quartz, apatite, and has large lumps and cubes of solid silver-lead, and is letting down a torrent of water. It is our opinion that a most productive mine will now be opened up, as the ground is being entered which is so highly thought of by the miners of the locality.

WHEAT JANE.—R. Southey, July 19: Since my last a fortnight ago there are no alterations to notice. The tutwork bargains and tribute pitches are all in change to report in any of our bargains in the old part of the mine. Un- fortunately, about a fortnight since, we had a breakage to our angle-hat at the bottom of the downright, which delayed us for some time, thereby covering our bottom levels with water. The best of our tin ground being in our bottom levels, the delay will naturally effect this fortnight's returns. We again have the mine in fork, and the machinery and pitwork working well, and are vigorously pushing on all the work throughout the mine. The men are making fair progress in sinking the new shaft on Great North Downs copper lode. The lode still produces a most favourable indication of being rich for copper in depth. Only yesterday we met with some beautiful specimens of black and yellow ore, being far richer than anything we have before seen in the shaft. This is a greatly encouraged us in the belief that we shall soon meet with a good course of ore.

## VAN MINES—MONTHLY REPORT.

July 18.—I have no news to report from the 120 west this week. The end is poor. As soon as we have communicated with the winze sinking below the 105 we shall cross-cut to prove the value of the lode. The cross-cut south behind this end has been driven 16 ft. since my last report, but we have not seen the hanging-wall yet. The cross-cut north at the end of the 105 west is driven 3 fms. The lode here is strong, and produces no end of any value. When we reach the footwall we shall cross-cut south as well. The 170 winze below this level is sunk 11 fathoms. The lode is strong but unproductive. The winze from the 60 stope to the 125 level is completed, and the men have resumed the extension of the stope. The cross-cut north at the 90 west under Edward's shaft has been driven 11½ fms. Edward's shaft is sunk 2 fms. below the 75. We are ready for the rock-drills, which we hope to receive early next week. The stopes in the back of the 75 west are nearly all now worked in timber in consequence of our proximity to the 60. This, of course, entails a great deal of extra care and cost. All the stopes produce their value in quantities of lead ore. There is nothing else underground, I think, calling for remark.—Surface: All our surface workings are progressing regularly. The machinery is in good working order except the boiler reported in want of repairs, which are having our attention. We are still going on with the walling at top reservoir, which, when complete, will ensure us against further trouble for many years. We have commenced our hay harvest, but the weather so far is against us.—P.S.: Our monthly sale takes place to-morrow upon 200 tons of lead ore.—W. H. WILLIAMS.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool, July 14)—Chili copper charters for second half of June were advised on July 2 at 1700 tons fine, of which 350 tons bars and ingots, with 700 tons furnace bars, for England, and 450 tons bars and ingots for Continent. Price of bars was 817/8½ and exchange 35½d. After the issue of our last report the price of Chili bars receded to 637/8. 6d. per ton, but quickly recovered, and a very large business was done up to 642/5. 5d. per ton, and upwards of 800 tons Australian ingot, cake, and rough slab copper were taken at various prices equivalent thereto. Import of Chili copper during the past fortnight, 960 tons fine, against 1472 tons same time last year; delivery, 943 tons, against 1336 tons same time last year. Import of other copper during the past fortnight, 2270 tons fine, against 172 tons same time last year; delivery, 1336 tons, against 755 tons same time last year. Arrivals here during the fortnight of West Coast, S. A., produce:—Emerald, from Valparaiso, 50 tons regulus, 23 tons bars; Jesse Jamieson, from Tongoy and Guayacan, 200 tons bars; Cordillera, from Valparaiso, 8c., 14 tons regulus, 285 tons bars, 145 tons ingots. At Swansea, 47 tons Bolivian regulus, 283 tons fine, 492 tons regulus. Stocks of copper (Chilian and Bolivian) in firm's second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	455	17,112	360	—	—
Swansea	3,573	7,070	—		

at 97.—COPPER: There has been but little variation in price since we issued our last circular. Chili bars declined from 64. to 63. 5s. cash, but have since recovered, and to-day's price is about 63. 12s. 6d. for good ordinary brands. Manufacture is in moderate demand, and strong sheets are steady at 75.

### TO THE METAL TRADE.

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### The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JULY 20, 1883.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, G.M., f.o.b., Clyde...	2 7 4	—	English, ingot, f.o.b. ...	96 10 0	—
" " " " " " " "	2 8 3	2 8 6	" " " " " " " "	97 10 0	—
Bars Welsh, f.o.b. Wales	5 7 6	—	" " " " " " " "	98 10 0	—
" " " " " " " "	5 17 6	—	Australian " " " "	93 2 6	93 5 0
" " " " " " " "	7 0 0	7 5 0	" " " " " " " "	—	—
" " " " " " " "	5 15 0	—	Straits " " " "	93 2 6	93 5 0
" " " " " " " "	9 0 0	9 5 0	<b>COPPER.</b>		
Rails, Welsh, at works	5 7 6	—	Tough cast and ingot	66 0 0	67 10 0
Sheets, f.o.b. Wales	8 0 0	8 10 0	Best selected	69 0 0	70 0 0
Plates, ship, in London	8 5 0	8 10 0	Sheets and sheathing	73 0 0	75 0 0
Hoops, f.o.b. Wales	7 5 0	7 10 0	Flat bottoms	76 0 0	78 0 0
Nail rods, f.o.b. Wales	7 0 0	—	Wallaroo	69 10 0	—
<b>STEEL.</b>			Burra, or P.O.C.	68 0 0	—
English spring	12 0 0	12 0 0	Other brands	65 10 0	66 10 0
" " " "	12 0 0	12 0 0	Ohili bars, g.o.b.	63 12 6	63 15 0
Swedish, keg	15 0 0	—	<b>QUICKSILVER.</b>		
" " " "	15 0 0	—	Flasks, 75 lbs., wat.	5 12 6	—
Rails at works	4 15 0	5 0 0	<b>PHOSPHOR BRONZE.</b>		
" " " "	6 10 0	—	Alloys I., II., III., and IV.	£122 0 0	—
<b>LEAD.</b>			" " " "	£128 0 0	—
English pig, common	12 5 0	13 0 0	" " " "	£114 0 0	—
" " " "	12 5 0	13 0 0	<b>BRASS.</b>		
" " " "	12 5 0	13 0 0	Wire	7 1/2 d.	—
" " " "	12 5 0	13 0 0	Sheet	7 1/2 d.	—
" " " "	12 5 0	13 0 0	Yel. met. plates & sheets	6 1/2 d.	—
" " " "	12 5 0	13 0 0	<b>TIN-PLATES.</b>		
" " " "	12 5 0	13 0 0	Charcoal, 1st quality	1 0 0	1 2 0
" " " "	12 5 0	13 0 0	" " " "	0 19 6	0 17 0
" " " "	12 5 0	13 0 0	" " " "	0 16 0	—
" " " "	12 5 0	13 0 0	" " " "	15 10 0	—
" " " "	12 5 0	13 0 0	" " " "	12 0 0	—
" " " "	12 5 0	13 0 0	" " " "	30 0 0	—
" " " "	12 5 0	13 0 0	" " " "	14 x 10	—

At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 10 quoted above, and add 6s. for each X. Terms: 2s. per box below tin-plates of similar brands.

**REMARKS.**—There is still a great deal of uncertainty in our markets, and business continues to drag in almost all branches, and prices for the most part are, in consequence, easier, but without any great variation. The general demand though by no means stagnant is very dull, and political and other events rather tend to depress the speculative enquiry. Advances from abroad are not favourable and in many instances are so unsatisfactory as to intensify the depression, and instead of giving the hoped-for support, generally produce weakness and help to further dull the tone. To take as a sample the news that comes from America, that large market of which so much is expected, the country noted for its vast consumption of all metals, and so thoroughly characterised for its construction of fresh and extension of old railways, and also for its numerous enterprising schemes and even from these sources are unsatisfactory and unpromising; they give no cause to justify the anticipation of any immediate recovery, and they show that the state of the trade now to be dull, lifeless, and uninteresting, and further, a recent return of the number of failures in the United States during the first half of the present year show a startling increase compared with the corresponding period of the two previous years. Such advances as these tend to contradict those suppositions which in certain quarters exist that the state of trade in that country is generally prosperous, and it most decidedly looks that instead of business being flourishing it is inanimate, and traders have become much more impoverished, which of itself must tend to narrow the limits of trade, and prevent the much-desired expansion.

It must require time to restore the trade, and bring it back to its ordinary condition, and from what has been said it will be gathered that that will be facilitated by keeping prices steady, and not for suppliers to push them up upon the first symptoms of recovery beginning to make themselves manifest. If we turn to other sources, the trade is reported equally dull, and some time must almost, of necessity, pass before it can again be roused from its state of lethargy into which it has fallen, and remained for so long past. This week the markets all round have been very steady. There is nothing to report in general on their tendency; the new features that have arisen have been trivial; business in all branches has been exceedingly quiet, and perhaps orders have been more scarce than they otherwise would have been, owing to the long delay in the deliveries of the Indian malle. Speculators have been less ready to make purchases; but in many instances they have shown a fair amount of firmness in their prices, and manifest no disposition whatever to make concessions. At the same time, while holders have not been very ready sellers, buyers have been equally reluctant to purchase, and it has now to be seen whether holders will yield and endeavour to stimulate the demand by making further sacrifices, or whether buyers will spring in their limits. If buyers continue to purchase in the same hand-to-mouth style as they have done for a long time past, then there seems little to prevent prices from crumbling away to lower figures than are now being quoted.

**COPPER.**—This market keeps very dull and in a somewhat uninteresting condition. The market may be said to be featureless; the price of Chili bars, for the most part, has been extremely steady, sharp cash parcels having chiefly been quoted at 63. 15s. g.o.b.s. Holders seem very reluctant to part with their copper unless full rates are paid, but buyers are not willing to pay the present figures, and yesterday there was less strength manifest in quotations, probably on account of holders becoming weary of having to cling to their stocks for so long a time. Speculators show no inclination to come forward and relieve them of their stocks, nor is the demand for consumption and shipment altogether satisfactory. On Monday last the Chili charters were advised for the first fortnight of the present month as 1800 tons; but notwithstanding that this quantity is full and somewhat above the usual fortnightly average, yet at the same time it produced very little detrimental effect upon the market, that is to say so far as prices are concerned, for they kept steady, although, perhaps, the heavy quantity checked to some extent the speculative enquiry.

Passing from the charters to the bi-monthly statistics, we have another feature which must give more or less cause for anxiety. In the first place the imports of Chilean and Bolivian produce into Liverpool and Swansea during the first fortnight of the month have been 960 tons, and the deliveries 943 tons, thus increasing the stock in first and second hands to 26,355 tons, against 26,338 tons on the 29th ult. This difference, however, although against holders, is but trivial, but a more striking feature in the returns are the imports of the other descriptions of copper, which are reported as 2270 tons, while the deliveries are only 1325 tons. The total imports for the first six months of the present year have been 48,981 tons, against 42,883 tons for the same time of last year, and 40,152 tons for the similar period of 1881, while the exports for the same time of this year have been 31,709 tons, against 28,278 tons last year, and 28,787 tons for the similar period of 1881.

**IRON.**—The great Staffordshire strike which has lately been disturbing this trade has at length been brought to a close, and at most of the works the men have resumed work at the reduced rate of wages, though in many instances it has been decided, if found necessary, to give notice for revision of the sliding-scale. It is satisfactory to find that the men have again returned to their work instead of holding out longer, and making the strike, as it once proved to be, a very prolonged affair. The men had evidently under the influence of their leaders made a great mistake, and the best thing to do under the circumstances was to rectify their error

with as little delay as possible. This has now been done, and it is only fair to the men to state that if intimidation had not been exercised there are many of their number who would never have joined or had any sympathy with the movement, and several of the works would not have closed at all. At the same time by their action much inconvenience has been caused to consumers and shippers through the great delay of necessity made in deliveries. The men cannot look back on their action of the past week or so with feelings other than of regret, for in addition to the trouble buyers have had to experience, the men themselves have had to pay the consequence of their hasty movement; those amongst them who have been provident in times past have had their little haulings greatly reduced, while those of their number who never prepare for a rainy day have been made to feel the bitter pangs of keen poverty, and now as they return to their work and observe the broken windows, the damaged plant and machinery, and the manifest traces of their own wilful and wanton mischief, their feelings of regret can hardly fail to be intensified.

It is to be hoped that the lessons of this strike will be sufficient to teach the men to be more guarded in the future; and instead of being carried away by the rash and foolish advice of some few leaders, to judge for themselves from sound reason and good common sense. Now that the strike has collapsed, manufacturers are again able to accept orders, and promise some time for deliveries of specifications. Owing to the Glasgow holidays, there was no warrant market held last Monday, and on Tuesday the market opened with a quiet tone, and a small business only was done between 47s. 8d. and 47s. 6 1/2 d., closing with buyers at the lowest figure. On Wednesday the market continued quiet, and only a moderate business was transacted, the price ranging between 47s. 5 1/2 d. and 47s. 4 1/2 d. cash. Yesterday the market was quiet, and a limited business only was done between 47s. 6d. and 47s. 5d. cash, and to-day the closing figure is advised as 47s. 4d. per ton. The shipments last week were 12,441 tons, against 13,136 tons for the corresponding week of last year, or a decrease of 695 tons, and which makes the total shipments for the whole of this year 339,535 tons, against 329,536 tons for the same time of last year, and 301,227 tons for the similar period of 1881. There is one extra furnace in blast, the total now being 114, against 113 last week, and the public stock has been further slightly increased by 131 tons, and now amounts to 534,918 tons, against 534,737 tons last week.

The imports of Middlesbrough pig-iron into Grangemouth last week were 5710 tons, against 5605 tons for the corresponding period of last year, being an increase of 105 tons, and which leaves a total increase for the whole of this year compared with last of 25,331 tons. The Cleveland market is said to have continued steady as regards price, and a fair business has been transacted in No. 3 at 39s. 4 1/2 d., although political affairs rather tend to unsettle the tone. Owing to Middlesbrough prices being much lower than those quoted in Glasgow large quantities of Cleveland iron are sent thither. The public stock has undergone very little alteration, there being only a decrease of 34 tons for the week, and the quantity now in store is estimated at 74,776 tons. In manufacture there is only a small business doing, and prices for all descriptions are steadily maintained at last week's rates. The market at Wolverhampton has improved, owing to the resumption of business after the strike; all the works, however, have not re-started, but the partial resumption of work has improved the state of the trade, at the same time the market is still unsettled as there is much uncertainty about deliveries.

For immediate delivery advanced prices are being quoted. The present price that is asked for sheets is 7s. 15s. to 7s. 10s. for singles, and 8s. 15s. for doubles, while ladders are held for 9s. 10s. Pig is dull of sale at 40s. for common native sorts, and 47s. 6d. for Derbyshire qualities. Advances from Birmingham show business generally has been resumed, although there are some works which are still standing idle. Enquiries for the most part are good, but producers still hesitate about taking orders for forward delivery until the labour question becomes more thoroughly settled. Sheets are in good request at an advance of 5s. to 7s. 6d. upon recent quotations, but in marked bars there is very little doing. In the raw material there is not much business being transacted, and prices keep steady for all descriptions. The trade in Wales is still quiet, but manufacturers seem to be looking for rather better times, and two fresh furnaces are said to have been blown in. The advances from America do not show much alteration in the state of the market there, prices being reported steady, but on the whole, somewhat stronger. There is a great deal of quietude in scrap and old rails at previous rates.

**TIN.**—At the commencement of the week prices for this metal were easy, but on Wednesday a favourable turn took place, and since which there has been a hardening tendency and more disposition evinced to make purchases. The official price quoted on Monday was 92. 12s. 6d. for foreign, sharp cash parcels, from which it dwindled down on the following day to 92. 5s., and after which there was a recovery, the market eventually gaining more than it had previously lost. The deliveries for the first fortnight of the month are reported very good, and this undoubtedly has given some strength to the market, encouraged more operators to purchase, and formed some check to the downward course prices were assuming. It is a feature of much congratulation for the trade, one that has for a long time been the principal mainstay to the market, and one that has enabled holders for many months past to realise a full value for their metal, and to obtain high prices when holders of other metals have had to be content with very low and often very unremunerative figures.

It is always a good sign when current prices do not interfere with consumption, and suppliers of tin have for a very long time past had much cause to deem themselves fortunate in obtaining full rates, and the only fear is lest they should be tempted by the prevailing profitable figures to send forward supplies in excess, and thus swell up stocks and prevent the continuance of favourable rates. If we take the supplies for the whole of this year to the end of June, they will be seen to have been heavy every month, and although at times the deliveries, which have always been good, have exceeded them, and thus prevented stocks from being augmented upon some occasions when the statistics have been compiled, yet for the whole six months the visible stock has been increased slightly, clearly indicating that suppliers will continue to send tin forward in tolerably large quantities, even perhaps above the wants of the trade, so long as they can obtain current rates.

**SPELTER.**—There is but little demand, and prices are unchanged, ordinaries being quoted at 15s. to 15s. 5s., and specials at 15s. 5s. to 15s. 7s. 6d. per ton.

**LEAD.**—Vendors have accepted 12. 7s. 6d. for Spanish, and there are further sellers thereat, while English is quoted at 12. 15s. to 13. per ton.

**STEEL.**—A moderate business continues to be done at steady prices.

**TIN-PLATES.**—Prices are strongly upheld, which rather tends to check business, as purchasers will not increase their limits. The trade in Wales is said to be quiet, and much depressed, but quotations there are steady.

**QUICKSILVER** has been freely bought for export, and is again dearer at 57. 12s. 6d.

**THE MINING SHARE MARKET** has been rather more active this week for a few minutes, but on the whole very little alteration has taken place in prices, and quotations are mostly nominal. The mines dealt in have included Prince of Wales, Wheal Crebtor, Dolcoath, South Caradon, Wheal Uny, South Caradon (Limited), West Kitty, Organs, Bratsberg, and a few others.

**TIN.**—No alteration has yet been made in the standards for ore in Cornwall, and there is very little doing in shares. Blue Hills, 1/2 to 3/4; Cooks Kitchen, 27 to 29; Carn Brea, 6 1/2 to 7; Dolcoaths have advanced to 62, 64; East Pool, 42 to 43; East Blue Hills, 6s. to 8s.; Killifreth, 2 to 2 1/2; New Kitty, 2 to 2 1/2; South Caradon, 8 to 8 1/2; South Frances, 9 to 9 1/2; Tincroft, 6 1/2 to 7 1/2; North Blue Hills, 2s. 6d. to 3s. 6d.

Devant, 7 to 8; at the meeting a dividend of 5s. per share was declared. The accounts showed tin credited 4730.7, including 10 tons not sold; copper, 2678. 5s.; arsenic, 80.7; profit for the four months, 679. 10s. The dividend amounted to 625. The prospects of this mine were considered favourable, and with a fair price for minerals may go on paying dividends. Camborne Vean, 1/2 to 3/4; at the meeting a call of 1s. per share was made. The debit balance was 204. 4s. Wheal Agar, 15 to 16; Wheal Grenville, 6 to 6 1/2; Wheal Kitty (St. Agnes), 1 to 1 1/2; Wheal Peevor, 3 1/2 to 3 3/4; Wheal Uny, 3 1/2 to 3 3/4; New Trumpett, 1 1/2 to 1 3/4; West Polbreen, 1 to 1 1/2; Trevaunance, 2 1/2 to 2 3/4; West Kitty, 13 to 13 1/2; Tresavean, 2 to 2 1/2; Mounts Bay, 1/2 to 3/4; South Crofty, 7 to 8; Wheal Basset, 5 to 5 1/2; West Basset, 5 to 5 1/2; Wheal Jane, 1/2 to 3/4; the mine has sold 14 tons of tin for the month, and the costs have been decreased to 555.7 a month. The jiggers of Capt. Southey are said to be a great success, and it is hoped the returns will be increased through them.

**COPPER.**—At the Cornish Ticketing, on Thursday, the standard for ore declined 5s. The average price of the ore sold was 27. 14s. 6d. per ton; standard, 104. 2s.; average produce, 5. Bedford United, 1 1/2 to 1 3/4; the sale of 115 tons of ore realised 402. 2s. 6d. Devon Great Consols, 3 1/2 to 3 3/4; the sale here—923 tons—realised 1398. 15s. 6d. Gunnislake (Citters), 1 1/2 to 1 3/4; the sale here—452 tons—realised 2037. 1s. Marke Valley, 3 to 4; the ore—120 tons—brought 362. 6s. 6d. New West Caradon, 1/2 to 3/4; New Caradon, 1/2 to 3/4; West Caradon, 1/2 to 3/4; West Crebtor, 1/2 to 3/4; West Seton, 14 to 16; Mellanear, 3 to 3 1/2. Wheal Crebtor, 2 1/2 to 2 3/4; at the meeting, particulars of which will be found in another column, a dividend of 2s. 6d. per share (1500.7) was declared. The accounts charging five months' cost against five months' returns showed a profit of 902. 11s. 2d., which, added to undivided profit of last meeting—477. 6s. 11d.—left a balance to divide of 1379. 18s. 1d. The statement of assets showed liabilities—lord's dues, 227. 13s. 8d.; assets, 223. 15s. 8d. Since the last meeting ore has been met with in the bottom level, the 132, worth 10 tons per fathom of rich ore (richest in the bottom of the level), and the shaft is down to another level, which will be commenced at once. Altogether, therefore, the prospects are very encouraging, and an application is to be made for a lease of the eastern mine. Prince of Wales shares have been in considerable demand owing to a great discovery, and leave off 1/2 to 3/4. At the meeting,

particulars of which will be found in another column, a call of 2s. 6d. per share was made. The accounts showed, tin sales, 389. 11s. 8d.; copper sales, 339. 2s. 10d.; and a balance of liabilities over assets of 1135. 1s. 2d. It is generally supposed that the main lode of Prince of Wales which gave such great returns in the eastward, has been cut in the 77 and 90 west. The agent reports the prospects as more encouraging than at any former period, and he hopes to considerably increase the returns. South Penstruthal, 1 1/2 to 2; a branch has been cut in the 150 cross-cut, with good stones of tin. This cross-cut is expected shortly to reach the lode. Devon Friendship, 4s. to 5s.; the 42 ends east and west continue to look well. Floyd's stope at the 30 west is worth about 1 ton of copper and 5 tons of arsenical mundic per fathom. The winze below the same level is worth 8.7 per fathom for mundic, and there are stones of copper, Langford, 1/2 to 3/4; at the special meeting a resolution was passed to issue 10,000 8 percent. preference shares. Of these the directors intend to issue 5000, in lieu of the 5000 unissued ordinary shares. Gawton, 1/2 to 3/4; Sortridge, 2 to 3; South Devon United, 1/2 to 3/4; Mona, 4 to 4 1/2. South Caradon Consols, 1/2 to 3/4 prem.; the sale of ore—150 tons realised 912. 5s. The course of ore in the 160 continues.

**LEAD** mines continue inactive, and scarcely any business doing. Quotations nominal. Vans are quoted 5 1/2 to 5 3/4; Roman Gravel, 7 1/2 to 7 3/4; Tankerville Great Consols, 3s. to 5s.; no change here. South Darren, 1/2 to 1; the lode in the 130 east is worth 1 1/2 ton silver lead, and the 120 east 2 1/2 tons. D'Eresby Mountain, 1/2 to 3/4; one of the stopes has improved to 2 tons per fathom. Pennant, 1 1/2 to 2; Sinclair, 2 1/2 to 2 3/4; Great Holway, 5 to 5 1/2; Coed-y-Fedw, 2 1/2 to 2 3/4; a discovery has been made in the 90 west, where the lode is worth 3 tons of lead per fathom. Pen-y-Oscedd, 1 to 1 1/2; East Rose, 9s. to 11s.; Old Shepherds, 1/2 to 3/4; Leadhills, 2 1/2 to 2 3/4; West Lisburne, 1/2 to 3/4; Weardale, 1/2 to 3/4, prem.; there are now 239 men at work at the different mines, and the prospects are considered very encouraging.

**FOREIGN MINES.**—Akankoo, 1/2 to 3/4; Alamillos, 1 1/2 to 1 3/4; Anglo-African Diamond, 2 to 3; Almada and Tirito, 1/2 to 3/4; Bratsberg, 2 1/2 to 2 3/4; Cape Copper, 46 to 49; Chile, 1/2 to 3/4; Callao Bis, 9-16ths to 11-16ths; Colorado United, 1 1/2 to 2 1/4; Copiapo, 3 1/2 to 3 3/4; Denver, 1/2 to 3/4; Devala Moya, 1/2 to 3/4; Eberhardt, 1/2 to 3/4; Fortuna, 3 to 3 1/2; Frontino and Bolivia, 1 1/2 to 1 3/4; General Mining, 5 1/2 to 6 1/4; Indian Consolidated, 1/2 to 3/4; Indian Glenrock, 1/2 to 3/4; Indian Phoenix, 1/2 to 3/4; Indian Trevelyan, 1-16 to 3-16ths; Kapanga, 1/2 to 3/4; a telegram has been received: Seventy forked; all hands working.

Kimberley North Block Diamond, 3 to 4; a dividend of 5s. per share has been declared. Lake Superior Native Copper, 1 to 1 1/4; La Plata, 1/2 to 1 1/4; Marbella, 4 to 4 1/2; Mysore Gold, 1/2 to 3/4; New Emma, 1 1/2 to 2 1/2; New Quebrada, 4 to 4 1/2; ditto Debutentes, 98 to 103; Nouveau Monde, 5-16ths to 7-16ths; Organs, 1 1/2 to 1 3/4; the report of the meeting, held this afternoon, will be published in next week's Journal. Panulcillo, 6 1/2 to 7; Potosi, 1/2 to 3/4; Rhodes Reef, 1/2 to 3/4. Richmond, 6 1/2 to 7; Rio Tinto bonds, 100 to 102; ditto shares, 21 to 22; Ruby and Dunderberg, 1 1/2 to 1 3/4; South Australian Copper Mines Corporation, 1/2 to 1; St. John del Rey, 100 to 120; Tolima, A, 6 1/2 to 6 3/4; ditto B, 3 to 3 1/2; United Mexican, 5 1/2 to 6; Victoria, 1/2 to 1; Western Andes, 5 1/2 to 5 3/4.

The Market for Mine Shares on the Stock Exchange has not shown any material improvement, yet slightly more business has been done than last week, and there is a decidedly better feeling with regard to the future. The Organs Gold Mines held its meeting this afternoon, and the accounts presented are certainly extraordinary as compared with company's accounts submitted to shareholders during the past few years—the executive appear to have reverted to the almost forgotten practice of expending the company's capital upon working the mine. There has been raised share capital 14,958.7; debenture capital, 3553. 15s.; together 18,511. 15s. On the other side of the account there has been expended in salaries, wages, machinery, stores, freights, customs duties, and so on (there was no purchase money paid for the mines), 19,322. 2s. 1d. gross, of which the sum of 2216. 1s. 5d. was provided by gold sold, profit on exchange and stores resold, leaving net outlay 17,106. 10s. 8d. The available cash balance is 524. 7s. 10d.; the debenture interest to June 30 was 44. 13s. 1d.; office and preliminary expenses, charges attending issue of debentures, legal charges, and so on have all been covered by less than 2300.7. Whatever may be the ultimate result of the company's operations there would seem to be no question that the whole of the shareholders' money has been expended on the property—none having gone to vendors or promoters—and that the expenditure has about sufficed to bring the concern into a self-supporting condition. All concerned may well be congratulated on the results, and if all companies were formed upon an equally equitable basis there would certainly be less complaints from shareholders, and larger profits for all.

Our usual telegram from Cornwall, received this evening, says:—Mine Share Market continues dull. Camborne Vean made a call of 1s., and agents are hopeful. The same day Levant declared a dividend of 5s., but the resolution was only carried by one: 10 tons of tin unsold was credited, and copper payments anticipated in two months. The resignation of Capt. Nicholls, manager of Pedn-ar-drea, caused a sensation, and shares fell. John Mayne will be tried for Dolcoath frauds at Bodmin Assizes next week. He is said to be very ill, and not likely to long to survive his trial. Eminent counsel are retained to defend. The closing prices to-night are—Bedford United, 1/2 to 3/4; Blue Hills, 1/2 to 3/4; Carn Brea, 7 1/2 to 7 3/4; Cooks Kitchen, 29 to 30; Devon Consols, 3 to 4; Dolcoath, 63 to 64; East Pool, 42 to 43; Killifreth, 2 to 2 1/2; Mellanear, 3 1/2 to 3 3/4; New Cooks Kitchen, 5 to 5 1/2; New Kitty, 2 to 2 1/2; Pedn-ar-drea, 1 to 1 1/2; Phoenix, 2 to 2 1/2; South Caradon, 8 to 8 1/2; South Crofty, 7 1/2 to 8; South Frances, 9 to 9 1/2; Tincroft, 7 to 7 1/2; West Basset, 5 to 5 1/2; West Kitty, 12 to 13; West Peevor, 15 to 16; West Tolgus, 10 to 12; Agar, 15 1/2 to 16.

The Graskop (Transvaal) Gold Mining Company. List of applications for shares will close on Tuesday next for London and on Wednesday for the country. The shares have, it appears, already been largely applied for.

In Diamond Mining Companies Shares the amount of business doing has been unimportant, yet the prospects are considerably brighter, as the number of mines in operation is diminishing, and the price of diamonds is slight. The statement of the Schwab's Gully Diamond Mining Company (De Beer's Mine) for the fortnight ended June 16 shows that the quantity of blue ground hauled during that period was 2220 loads; washed, 3000 loads; on floors at that date, 14,448 loads. Diamonds to the extent of 2336 1/2 carats were found, and 2250 1/2 carats sold, realising 2293. 1s. 6d. during the two weeks. Revenue from other sources during the same period 636. 1s. 10d. The total working expenses were 800. 13s. 9d.

Devon Great Consols, 4 to 4 1/2; the monthly sale of copper ore on Thursday realised about 1400.7. According to the agent's report there is no particular alteration during the past week. In the rise, however, above the 137 east, in old ground, the lode is 5 to 6 ft. wide, and producing 4 tons of mineral per fathom.

Drakewalls, 1/2 to 3/4; a sale of 12 tons 18 cwt. of black tin has been made this week, which realised 704. 3s. 4d. The shaft has been cleared to the 70, and pumping of water below the level will be proceeded with.

Kit Hill Consols, 1/2 to 3/4; the tunnel level has been driven during the past week 2 fms. 2 ft. The lode in the north engine-shaft, as well as the 75 west, is producing good quality tin ore. South Devon, 1/2 to 3/4; the 110 east continues to be worth about 12.7 per fathom, and good progress is being made at the other points of operation.

California Gold, 1/2 to 1; it being desirable for safety to suspend work in the shaft and bottom levels until new hoisting ropes could be fixed accounts for the smaller mill runs during the past two weeks. The mill run for this week was 320 tons, yield \$2000. As soon as the deep workings can be resumed, doubtless the yield will again rise to its former figure. For the reasons stated it was necessary to raise the ore entirely from some of the upper levels where the average value is lower than in the recent workings.

Chile, 1/2 to 3/4; the company have forwarded certificate which they have had from Messrs. Pixley and Abell, showing the quantity of gold received by them on account of the company during the six months ended June 30. The figures are:—Jan. 30, 1943.66 ounces, worth 7508. 0s. 6d.; March 2, 1100.55 ounces, worth 4127. 14s.

April 3, 2529.45 ounces, worth 97367. 8s. 5d.; April 29, 1574.55 ounces, worth 57144. 17s. 2d.; June 1, 1861.60 ounces, worth 70677. 0s. 1d.; and June 28, 2512.30 ounces, worth 97227. 13s. 4d.

Kohinoor and Donaldson,  $\frac{1}{2}$  to 1; the weekly report has not yet been received, having been delayed in transmission.

Ruby and Dunderberg,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; the weekly report advises good progress in developing the ore body at the Home Ticket Mine. The new shaft is being sunk below the ore, so as to facilitate the workings. The ore body was dividing into two, one part pitching north and the other south. The tributaries at the Lord Byron Mine had come on a small seam of good ore, which was considered very promising. The tributaries at the Dunderberg were working on as usual. The weekly telegram advises an outturn of 113 tons from the Home Ticket and 14 tons tribute from the Dunderberg. The 116 tons smelter, though still poor in quality, is rather better than the parcel smelted last week.

In Lead Mine Shares there has been no improvement worth recording, and the amount of business doing is exceedingly limited. Great Laxey are quoted  $16\frac{1}{2}$  to 17. Roman Gravel,  $7\frac{1}{2}$  to  $8\frac{1}{2}$ ; these mines continue to look well throughout, opening up important bodies of rich ore ground. Tankerville,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; some considerable purchases of shares have been reported during the past week. It is said that, owing to the exertions of the Chairman and managing director, some satisfactory arrangements are likely to be arrived at with regard to the royalties and the development of the mines. No doubt at the forthcoming meeting of shareholders on Wednesday next some further particulars will be given respecting the same.

The Bank of Egypt will pay on Aug. 4 the usual interim dividend at the rate of 5 per cent. per annum for the half-year ended June 30.

Weardale,  $\frac{1}{2}$  to  $\frac{3}{4}$  prem.; during the week Grove Rake, Killhope, and Green Lams Mines have been set on full work, and already there are indications of discoveries from the many exploratory bargains which have been set. The respective agents are examining other portions of the property this week with a view of starting other mines in this extensive mineral field.

Wheal Jane stocked tin, which was computed as being worth 24407., has been cleared off, and, after a portion of it had been redressed, has realised 2,4057.

The Adamant Diamond Mining Company have declared an interim dividend at the rate of 10 per cent. per annum.

At the Stock and Share Auction and Advance Company's sale on Thursday the prices, among others, obtained were:—Civil Service and General Store, 17s. 6d.; British Land, 10s. 5d. par; Indian Consolidated, 3s. 3d.; South African Syndicate, 50s.; Akankoo (Gold Coast) Mine, 7s. 6d.; Army and Navy Hotel, 5s. shares 2s. 15s.

At Redruth Ticketing, on Thursday, 2134 tons of ore of  $5\frac{1}{2}$  average produce, and containing 111 tons 12 cwt. of fine copper, were sold for 57487. 15s. 6d., being 27. 14s. per ton of ore, 10s. 3d. per unit, or 517. 10s. per ton of fine copper in the ore, and an average standard of 1047. 2s. Subjoined are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
July 5 ... 1441	...	...	...	...	...	...
July 19 ... 1116	...	...	...	...	...	...

Compared with the last sale the decline has been in the standard 5s., and in the price per ton of ore about 4d. The sales and amounts realised were:—Devon Great Consols, 923 tons for 13387. 15s. 6d.; Gunnislake (Clitters), 452 tons for 20337. 1s.; South Canadon, 150 tons for 9127. 6s. 6d.; Holmbush, 140 tons for 2807. 7s. 6d.; Marke Valley, 120 tons for 3627. 6s. 6d.; Bedford United, 115 tons for 4027. 2s. 6d.; Wheal Arthur, 104 tons for 1017. 8s.; Gawton, 82 tons for 597. 9s.; Prince of Wales, 48 tons for 1997.

**ORGANOS GOLD MINES.**—The ordinary general meeting of shareholders was held yesterday at the Cannon-street Hotel, when the report and accounts were adopted. The prospects of the company appear to be excellent. Had it not been for the breaking down of two steamers on the Magdalena river (which the directors had calculated upon to convey the machinery to the mines) no money would have been required beyond the original capital of the company. The returns from the crushing of 18 heads of stamps are of the most satisfactory nature. A full report will appear in next week's *Mining Journal*.

**SUCCESSFUL SINKING OPERATIONS IN THE ABERDARE VALLEY.**

—In Sept., 1882, Messrs. W. and John Beith, of Blackwood, who sank the Harris Navigation Colliery, the Pochin Pit, Tredegar, and several other collieries in South Wales, accepted the contract to sink the George Pit at Cefnpennar, about  $\frac{1}{2}$  mile from Mountain Ash, the property of the Powell Dyffryn Company, of which Sir George Elliot, M.P., is the head. The Messrs. Beith had to give a guarantee that the contract was to be completed in 12 months, a task which was considered by competent men well nigh impossible; but notwithstanding that the pit is situated where no accommodation can be obtained for the men, and other difficulties of an extraordinary nature, the 2 ft. 9 in. seam was struck on Saturday, and on Tuesday evening the celebrated Four-foot seam was struck at a depth of 370 yards, the coal turning out to be of first-rate quality. The sinking operations have been pushed on with vigour, having attained a depth of 300 yards since the commencement, having to go through the greatest percentage of hard rock that has had to be contended with in the valley; a series of faults were also encountered which impeded progress. It is expected that the colliery will be opened out without delay, which will afford employment for a large number of workmen. The depth of the pit when completed will be 450 yards, and the 7 ft. and 9 ft. will be worked. The company are to be congratulated upon this result, and the contractors for the success which has attended their efforts. The manager of these collieries is Mr. H. W. Martin, brother of Mr. Martin, Dowlais.

**SOUTH WALES INSTITUTE OF ENGINEERS.**—The general meeting of members was held at Cardiff on Thursday (the President of the Institute, Mr. Edward Williams, of Middlesborough, in the chair), and attended by a large number of members. The following gentlemen were elected members. Mr. Henry Herbert, Ammanford, Carmarthenshire; C. T. Bunning, mining engineer, Cwmanan Colliery, Aberdare; J. Ray, colliery manager, Ton Pentre, Pontypridd; Alex. B. Bassett, C.E., Cardiff. Mr. David Hannah, under colliery manager, Ton Pentre, Pontypridd, was elected a graduate. A paper by Mr. Thomas Griffiths "On the Endless Rope Haulage at Cymmer Colliery," a paper by Mr. David Evans "On Underground Haulage," a paper "On Addyman's Friction Crutch," by Mr. Thomas Evans; and a paper "On Bunning's Improved Water Level," by Mr. C. T. Bunning, C.E., which had been read at the previous meeting, were discussed. Two papers by Mr. Sydney F. Walker, M.S.T.C., "On the Principles of Electric Lighting and Transmission of Power by Electricity," were discussed at some length, and the further discussion of them adjourned till the next meeting. A paper "On Injectors and other Applications of Nozzles," by Mr. W. D. Wright, was ordered to be printed in the proceedings of the Institute.

**WEST PATELEY BRIDGE.**—At a special meeting of shareholders held at the offices of the company, Gresham House, on Thursday (Mr. H. A. Hammond in the chair). The resolutions which were passed at a special meeting held on July 3, were confirmed. A letter was read from the manager at the mine stating that the royalty on lead had been reduced from 1-14th to 1-20th.

**BIRMINGHAM AND HARROWBARROW MINING COMPANY.**—The allotment of shares is steadily progressing, and it is believed that they will shortly be in a position to pay the liquidators of Wheal Fortune the 22007. for the property and get ore to market. It is pointed out that the geological position of the mine is all that can be desired for the production of minerals, being in the best silver-bearing district in the counties of Devon or Cornwall. It is bounded on the north by the Prince of Wales Tin and Copper Mine, and on the west by the Wheal Brothers, East Cornwall, and Wheal Langford silver and copper mines, all of which have returned large quantities of silver and copper. The sett is very extensive, having more than a mile on the course of the lodes. The mine is supplied with a powerful 30-in. cylinder double-acting steam-engine, equal to all the requirements of draining the mine to any reasonable depth. The three lodes which have been proved in several places, and which run the entire length of the sett, are the Harrowbarrow copper and

arsenic lode, and the Wheal Brothers and Wheal Langford silver lodes. These three lodes all form a junction in depth, and toward the west are intersected by cross-courses. The most southerly of these lodes has proved very productive of copper and arsenic, while both of the others are true silver lodes. One, the famous Wheal Brothers lode, about the adit level, yielded large quantities of rich silver ore in the Wheal Brothers, Prince of Wales, and Queen Mines, the last-mentioned being now included in this company's sett. The other is known as the Well lode, and is a continuation of the vein which in the Wheal Mexico, East Cornwall, and Wheal Langford Mines to the west contained the richest deposit of silver ever worked in the United Kingdom.

**HAND-POWER ROCK-DRILL.**—Messrs. Greenwood and Batley, of Leeds, have a good specimen of their drill at the Engineering Exhibition at the Agricultural Hall. It is claimed that the machine has had a wonderful success in America, where it is extensively used in mining, quarrying, colliery, and railroad work. The drill, as exhibited, was made for the American market, where lightness was a special object; but at the request of several English miners the manufacturers have decided to make the guide bars heavier, without, however, altering the other parts in any way.

#### ETOWAH AND AURARIA HYDRAULIC HOSE MINING COMPANY.

A prospectus of this undertaking is at present in private circulation, and will, no doubt, be made public shortly. The project is to build a ditch 24 miles long through the Dahlonega district of North-Eastern Georgia. It is pointed out that under ordinary circumstances there are no better investments than ditch properties, and that in California \$100,000,000 are invested in them. The Etowah and Auraria ditch will furnish the water to a large district of great gold-bearing capacity, which it virtually controls. Without the water the district is almost valueless. With the water its value can hardly be computed. The ditch is constructed under a special charter from the State, which not only gives it great privileges in the process of its construction and operation, but by giving it the exclusive right to turn the waters of the Etowah river and its branches, gives it control of all the water that can ever be furnished to the district, and thus for ever prevents any competition.

The district is not a newly-discovered one by any means, it having been the first to produce gold to any extent in this country. It had produced many millions of gold from the crudest manner of working previous to its discovery in California, in 1849. There is a demand to-day in the district, at remunerative prices, for all water the ditch can furnish. There is now in operation in the district 18 stamp-mills, nearly everyone of which is retarded in its operations for a large portion of the year for want of water.

There is almost an unlimited amount of material that will pay to work hydraulically. This material, suitable for washing, is composed both of placer ground in the ravines and branches of small streams that were worked over in early times with the Gum Rocker, the Long Tom, and other crude appliances, by the use of which more of the gold in the earth was lost than was saved; and large amounts of rotten or decomposed slate, standing in place, similar to the formations in El Dorado and Calaveras counties, California. General J. Condit-Smith, Messrs. W. P. Ward, Clarence King, Dr. Newberry, and others have favourably reported on the district, which will be more fully referred to in a future *Mining Journal*.

#### MECHANISM FOR REGULATING THE PRODUCTION OF ELECTRICITY.

It is well known that when a number of incandescent lamps are lighted in the same electric circuit and if it be desired to extinguish some of them a larger quantity of electricity passes through the remainder of the lamps, thereby producing an unnecessary degree of illumination in them and endangering the continuity of the carbon filaments. Now, the invention of Mr. HENRY WILDE, of Manchester, consists in an arrangement of mechanism by which the speed of the electro-generating machine is regulated to supply the varying amount of electricity required to maintain the varying number of lamps in the circuit to their normal degree of incandescence.

In this improvement a solenoid of high resistance or an electro-magnet is placed in the major circuit in which the lights are produced, and as the strength of the current in the solenoid varies with the diminished or increased number of lamps in the circuit contacts are made (by means of an iron core within the solenoid acting on a balanced lever) with metal studs connected respectively with two sets of electro-magnets, either of which is excited by the direct major or minor current of the electro-magnetic induction machine. The electro-magnets are mounted on the faces of two iron discs which are carried on a horizontal axle, and between the electro-magnets on the same axle is mounted another iron disc which constitutes the armature of the electro-magnets on each side of it.

Motion is given to the armature discs by means or suitable belts and gearing connected with the steam-engine or other prime mover, and as the electro-magnets are excited on one side or other of the armature disc they are brought into forcible contact with it, and the discs on which the electro-magnets are mounted are carried round the axle in the same direction as the armature disc. To the bosses of the electro-magnet discs, which act as drums or rollers, cords or chains are attached, which are connected with the valves of the steam-engine or other motor by suitable means, and as one or other of the electro-magnet discs rotates so the valve is opened or closed by the winding up of the cords one direction or the other on the roller bosses of the electro-magnet discs, and the speed of the steam-engine and electro-generating machine are regulated to produce the amount of electricity necessary to maintain the lamps to the normal standard of illumination.

Another method of giving a reversible motion to the rollers on which the cords are wound for opening and closing the valves of the steam-engine or other prime mover is to employ a clutch and three bevel-wheel arrangement, the clutch being thrown in and out of gear by means of a lever actuated by two sets of electro-magnets excited alternately in the same manner as the electro-magnets on the discs in the arrangement above described. Motion may be given to the bevel-wheels and rollers by suitable belts and gearing connected with the steam-engine or other prime mover.

#### MANUFACTURE OF NICKEL AND COBALT.

Commercial nickel, even when tolerably free from impurities, as is well known, cannot be welded, hammered, drawn, &c., because the metal, when in a molten condition, absorbs oxygen and retains the protoxide thus formed. In order to prevent this disadvantage, various processes have been tried, such as, for example, the admixture of phosphorus or magnesium to the molten metal, and Mr. Fritz Lotter, of Altena, Prussia, has also frequently tried, by the addition of metallic manganese, to obtain the same results as are obtained by the addition of magnesium. These experiments with metallic manganese did, however, not lead to any particularly practical results, because, for instance, the intimate admixture of the manganese with the nickel could not be so completely effected as was necessary. The experiments showed, however, clearly that the manganese had a very favourable influence upon the nickel, and a product was, at any rate, obtained that could be worked tolerably well both hot and cold. This mode of manufacture is, however, connected with various disadvantages, and besides the costly metallic manganese renders the manufacture too expensive. He therefore endeavoured to devise some means for effecting the intimate admixture of manganese with nickel, according to some easy and inexpensive methods, and after many trials discovered the following process.

Oxide of nickel, free from injurious impurities, is mixed intimately in the form of powder with an oxide of manganese, in proportions to be determined for each particular case, after which the compound is formed, as is usual with nickel oxide, into discs or cakes, and reduced in the usual manner. When this mixture is smelted to form castings the manganese separates out. The castings thus obtained show great purity, density, softness, and malleability, besides hav-

ing a very fine metallic lustre. They are capable, both in the cold and the hot conditions, of being rolled, hammered, welded, drawn, and generally worked in any desired manner. Furthermore, the so obtained nickel has the property of rendering its alloys with other metals, such as copper, copper and zinc, and the like, considerably more ductile, and of better colour, and of producing dense and clean castings thereof.

The new process has also the great advantage that, by the addition of the inexpensive oxides of manganese, the nickel is scarcely rendered any more expensive, while the addition of phosphorus, magnesium, or metallic manganese is, as before stated, very difficult and expensive. In like manner metallic cobalt, in a ductile and malleable form, having properties similar to those above mentioned with regard to nickel, may be obtained by intimately mixing in like manner oxide of manganese with the oxide of cobalt in pulverulent form, and, after forming the mixtures into discs, cakes, or cakes, reducing the same in the usual manner, and melting it to form castings, and for use with alloys.

**GOLD AND SILVER.**—Messrs. PEXLEY and ABELL.—GOLD: There is no demand for gold, and all arrivals are purchased by the Bank of England; about 35,0007. in bars and coin, having been sent in: 100,000 sovereigns have been withdrawn for Lisbon, the Tamar, from the River Plate, brought 18,4747.; the British Queen, from New Zealand, 24,0007.; and the Lusitania, from Australia, 55,0007. Some amount has also arrived from the Continent, but the whole, according to present indications, will ultimately be sold to the Bank of England: 50007. was shipped to Bombay on the 17th inst. per P. and O. steamer Brindisi. SILVER has fallen in value; the Cordillera, from Chili, noticed by us last week, brought 30,8007., sold on the 13th inst. at 507. 10d. per oz. standard, the price has since receded to 507. 10d., our quotation of this day, owing to lower exchanges from India, and to the reduced rate obtained for the India Council Bills yesterday. The arrivals have been altogether unimportant. The P. and O. steamer Brindisi took on the 17th inst. 54,0007. to Bombay, and 55,0007. to Calcutta.

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Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 16—Foxdale	.....	108	£ 9 18 0	Weston, Son, & Co.
19—Van	.....	80	9 1 0	Walker, Parker, & Co.
—ditto	.....	40	9 6 6	ditto
—ditto	.....	40	9 3 6	Adam Eytan.
—ditto	.....	40	9 2 6	Goodhart and Co.
20—Lisburn	.....	25	9 3 6	Weston, Son, & Co.
—ditto	.....	25	9 3 6	Walker, Parker, & Co.
—ditto	.....	30	8 2 0	Panther Lead Co.
—Cwmystwyth	.....	20	7 10 6	Weston, Son, and Co.
—East Darren	.....	28	10 13 0	Panther Lead Co.

BLENDE.			
Date.	Mines.	Tons.	Price per ton.
July 18—Nantyrria	.....	25	£ 4 1 6
			Vivian and Sons

### Notices to Correspondents

**LA CONCESSION GOLD MINING COMPANY.**—Can some correspondent give me any information respecting the above? I, although a subscriber, have heard nothing since the list of contributors was settled on July 24, 1882. Any information through the medium of the Journal will be gratefully received.—A. McDougall.

**PORCELAIN MANUFACTURERS.**—Will some correspondent be good enough to give me a list of porcelain makers or firms, or any who are the users or consumers of potters' ore, blue lead galena. When will Hunt's Statistics be out?—W. B.

**Received.**—"J. W. H." (West Caradon): Shareholders' advertisements are charged 5s. for eight lines and 8d. for each additional line; if you send remittance with the advertisement it will be inserted—"J. G." (Saffron Walden): If you pronounce the *Organos* accounts unsatisfactory it must be from not having read them. If you suppose that persons circulate condemnatory circulars for any other object than to buy in shares which they have oversold it says little for your business capacity—"T. P. N. B." (Great Grimby): No one can give certain information as to any mine. Read preceding reply, which applies equally, so far as circulars are concerned, to the mines you mention—"V. B." (Dublin).

## THE MINING JOURNAL,

### Railway and Commercial Gazette.

LONDON, JULY 21, 1883.

#### CARBONIC ACID GAS IN MINES.

A few days ago it was stated that three persons were seriously injured by after-damp in a colliery in Scotland, caused by a slight explosion of gas. Most persons connected with coal mines are tolerably well acquainted with carburetted hydrogen gas, or fire-damp, but they do not know so much about the other gases which accumulate under ground, or even the after-damp. After an explosion, or in case of a fire, there escapes a mixture of carbonic acid, carbonic oxide, sulphurous acid, and carburetted hydrogen, which spreads itself over the whole of the working parts of the mine through the fissures of the earth or the barrier which divides the part of the fire from the rest of the mine. The carbonic acid also plays a most important part underground by itself, for it is found in all mines, and as a fact not generally known it may be said that it has been known to suddenly burst out in large quantities and killing everything within its range. It supports neither combustion nor life, lights being extinguished in air mixed with one-tenth of it. The gas acts on persons in the manner of poison, and as soon as it enters the atmospheric air by more than 8 per cent. there is danger of suffocation, persons who inhale it are stifled in a short time, but where they have been in it for a brief period they may be brought to life slowly.

Remedies, however, must be applied with great promptness, for the later they are in being employed the more there is to fear that they will not be efficacious. With respect to excavations in which the air is constantly renewed, and in the galleries of mines in general, carbonic acid gas is continually formed in more or less quantities, according to circumstances, so that it is necessary that the ventilation should be sufficient to draw it constantly away, and to keep that quantity which is mixed with the air in all parts of the workings beneath that limit beyond which it would become injurious to the health of the miners. But it is to be feared that carbonic acid gas has more to answer for than it is generally credited with, for it is not looked upon as being really dangerous, and it is consequently not so much looked after. Owing to its great specific gravity it has a tendency to accumulate in greater quantity in the lowest part of the workings of a mine, notwithstanding the fact that all gases possess the property of intermixing with each other, despite the difference in their specific weight. Few, even of our mine managers, however, are aware that carbonic acid gas has been known to suddenly burst out in vast quantities, destroying every living thing within its range. There is a case recorded and translated from the French by Mr. GREEN, M.A., in which there was a sudden outburst of carbonic acid gas of immense volume, which exploded with a loud report as if a shot had been fired. This strange occurrence, and the circumstance which accompanied it, shows that there is another source of danger to be apprehended in mines in addition to those already known. It appears that at the place alluded to there was a considerable expansion of carbonic acid gas, which was found at a high pressure in the bed of coal, and which had made an irruption in the right hand side of a drift by bursting the coal face, breaking and bursting to a considerable distance the coal which contained the gas. No doubt was entertained that the gas was carbonic acid, as it was recognised as such by the chief engineer and the workmen, and the extinction of all the lamps plunged into the air vitiated by the gas, being a most certain characteristic of carbonic acid.

The gas, on several occasions, had filled the galleries and driven out the workmen and killed one man. The question that naturally arises is as to what was the state of the gas shut up in the coal. It was at first thought that there had been an explosion of gas, but this was found not to have been the case, as the men descended with naked lights, and there was no explosion. This outburst of carbonic acid gas was similar in every way to the outbursts of gas which take place in the county, and show that it is liable to spontaneous disengagements of extraordinary violence. It appears to have left the coal in the case alluded to, and spread itself in the atmosphere of the mine. The mine, it appears, was sunk upon an anticlinal, the shaft going directly through the fault in the axis itself, so the circumstances are, perhaps, peculiar. It might be that the gas was due to the anticlinal axis. Under any circumstances, the gas must have existed under great pressure, and, being most elastic, have been compressed into a comparatively small space. The carbonic acid gas, it may be said, is more dangerous to human life than the carburetted hydrogen, so that it is most desirable that those connected with mines should be well acquainted with its properties and peculiarities. As it is, therefore, it is evident from what we have stated that there is a good deal yet to be learned concerning carbonic acid gas.

#### MINERS' DEMONSTRATIONS.

During the last week three great gatherings of miners have been held, attended by many thousands of workmen and their families. Some years ago when miners' demonstrations were initiated, they were principally for the discussion of trade and social questions, but now the political element appears to have taken the place of all others, so that pleasure and profitable information are not now the essentials obtained by those who attend these annual gatherings. This appears to have been the case at the demonstration on Friday last in the Forest of Dean, where Mr. BRADLAUGH was the principal speaker. It was the rule at the meeting at Durham, on Saturday last, and again at Barnsley, on Monday, when Mr. BRADLAUGH was the leading orator. As it was at Barnsley that the proposal to restrict the production of coal so as to raise its value and the wages of miners as well, it was expected that the author of the proposal which was to revolutionise the coal trade of the country, would specially refer to it. But such was not the case. During the agitation the miners were told that they had only to join the associations and contribute the money, when restriction would become the rule, and more wages received for five days' work than they had been getting for six days. The bait took remarkably well, and in the West Riding alone some thousands of miners were induced to belong to the Association. When this was accomplished little or nothing was heard about limiting the production of coal, for it was evidently found to be an impossibility. But the great object was attained of numerically and financially strengthening the Association, and making the salaries of the officials a greater certainty than they were before. The question of restriction was certainly introduced in a resolution in a most ambiguous and illogical manner. It stated, "That

this meeting is sorry to learn of the partial failure of the project for the restriction of the output of coal in the United Kingdom, but again affirms its conviction that over production is one of the greatest evils in the coal trade, and allows unfair competition, and causes low prices and wages." One is at a loss to find out how the meeting, the first of the kind held for several years, could "again confirm its conviction" as to over-production, and those who are acquainted with the coal trade will fail to understand what is meant by "the partial failure of the project," seeing that it has not been adopted in any district.

It is quite true that the men in several counties are only working four and five days a week; but this is entirely owing to the state of trade, whilst wages have been going down instead of upwards, to the serious loss of the men. There is, however, a singular addition to the resolution on the question of the limitation and over-production of coal, and it is clothed in rather peculiar phraseology. It states that—"We, therefore, pledge ourselves not to lose sight of the great destroyer of employers' and workmen's interest, believing that its removal would bring greater prosperity to those engaged in the production of coal." All, therefore, that the miners have had for the money paid by them to the Association on the belief that the promise held out as to increased wages for less work is the assertion that the question of limiting the output of coal will not be lost sight of. If the miners are satisfied with so very little for their money then others have no ground for complaining. At the same time, it would be well were the miners to recognise the fact that a general limitation of the production of coal is simply an impossibility, and this their leaders must be fully aware of. At the same demonstration a resolution was passed in favour of the Employers' Liability Amendment Bill, the second reading of which, it will be recollected, was defeated by an overwhelming majority of the House of Commons about a fortnight ago; but this, of course, was unknown to the mass of miners who were present, but it was evidently put down for the purpose of swelling the working side of the programme, which was particularly meagre, but which included the statement that for the purpose of obtaining future beneficial Acts of Parliament in the interest of the mining body there must be strong and wisely-conducted organisations; and a pledge was given to make the Yorkshire Miners' Association as strong and useful as any in the United Kingdom. Of course, the stronger the Union is, financially at least, so much the better for the officials who have to organise conferences to be held in different parts of the kingdom for impossible objects, as was the case with respect to the question of the limitation of the output of coal which led to the meeting of delegates at Birmingham, Manchester, Leeds, Barnsley, and Rotherham, but which resulted in leaving matters just as they were.

At the Durham demonstration Mr. COWEN addressed the vast gathering principally on the Corrupt Practices Bill, and the benefit the country would derive from the infusion of more working men in the House of Commons. Mr. O'CONNOR POWER, M.P., followed the able member for Newcastle, confining himself almost exclusively to an explanation of the law of primogeniture and entail. This is about the last subject one would have thought the working miners were even remotely interested in. There are very few of them we fancy who are beneficially interested in real estate, or are likely to be, or who are likely to leave any behind them. At both Dean Forest and Barnsley Mr. BRADLAUGH referred to the taxation of the country in favour of labour representation in the House of Commons, and the right of constituencies to nominate and elect any person who was free from crime. It will be seen, as stated earlier on in this notice, that the practical working subjects which were formerly discussed at miners' associations have been superseded by those of a political character—a change which we do not think at all beneficial to the miners of the country.

#### GOLD MINING IN THE TRANSVAAL.

The great and increasing importance of the Transvaal as a centre for gold mining operations has been illustrated very forcibly during the past week by the exhibits of auriferous quartz and alluvial deposits which have been on view at the offices of the Graskop (Transvaal) Gold Mining Company, at 31, Lombard-street. Before referring more particularly to these exhibits it may be well to notice briefly the situation and geological characteristics of the property which has recently been acquired by the Graskop Company. The estate is a very extensive one, the superficial area being slightly over 10,000 English acres, its altitude varying from about 4500 to 6500 ft. above the level of the sea. It is situated in the heart of the Lydenburg district, about four miles from the mining town of Pilgrim's Rest, and is surrounded by properties the value of which has been abundantly proved—such as Lisbon, Berlin, and Spitzkop. The varying altitude of the Graskop estate is an advantageous feature, as, owing to that fact, a large portion of the exploration will be effected by means of open cuttings, and by mining of the simplest and cheapest kind. Reports of a generally highly favourable character have been made on the property by Mr. A. C. Crutwell, F.G.S.; Mr. E. J. Dunn, late Geologist to the Government of Cape Colony; by Mr. John Webster, M.E., and by Messrs. Rickard Bros., the well-known mining experts. Without going into the details of those reports we may quote the following description by the Messrs. Rickards of the chief characteristics of the mine:—" (a) The diffusion of the gold, or in other words the abundance of the material. (b) The free nature of the gold, due to its disassociation with sulphides or other substances which so frequently render its separation difficult and wasteful. (c) The soft or easy nature of the rock and matrix, favouring rapid development and cheap mining and milling. (d) The presence of a good water supply, which our agent assures can be relied upon throughout the year to furnish milling power to the extent of 100 tons per diem. (e) The generally favourable conditions as to climate and labour, the uplands of the Transvaal being very healthy, and native labour good at low rates."

The mine has been amply tested, as eight claims on as many reefs have been worked to a greater or less extent; and although the system of development—if such it can be called—has been of a very primitive character—the results obtained have been highly remunerative. With proper appliances it is estimated that a yield of from 2½ to 3 dwts. of gold to the ton of quartz extracted will cover the costs of returning the metal; and as the average yield is stated to have been something over 1 oz. of gold to the ton, there is reason to believe that very satisfactory results will be obtained. The strata is composed of metamorphic rocks, the principle formations being sandstone, clay, and talcose slate, broken through in many places by intrusive rocks of diorite and basalt. The quartz reefs vary in thickness from a few inches to 20 ft., the two principal reefs having a width of 5 and 20 ft. respectively, these latter reefs having a dip of about 40°, and being reached within a few feet of the surface. A large number of smaller veins have been traced at surface for 400 or 500 ft., and several test workings have been carried on, resulting in gold being yielded in every case. The alluvial deposits are described by Mr. Webster as being 3000 ft. in length and 1800 ft. in width, which by an average depth of 10 ft. would represent a total of 2,000,000 cubic yards.

With reference to the samples of quartz, alluvial sand, and debris which have been exhibited, it is only natural to suppose that in selecting the samples for exhibition and assay care was taken that they should not unfavourably represent the worth of the property; but we were assured—and there is every reason to believe the assurance—that the specimens were fairly selected, and that while poorer pieces of quartz could have been submitted, very much richer stones than any of those exhibited might have been shown. The samples were arranged in four groups, the first containing a large number of pieces of quartz picked up indiscriminately; the second consisting of selected stones; the third of bags of pulverised rock, portions of which have been assayed; and the fourth having several specimens of the alluvial deposits, and some very tangible results in the shape of two weighty lumps of nearly pure metal taken from the bottom of the retorts, and a bar of fine gold weighing nearly 39 ozs., and representing a yield of about 2 ozs. to the ton of quartz treated—a result which is highly encouraging, when it is remembered that with the primitive appliances in use a large percentage of the valuable portion of the quartz must have escaped. The rock is of a very friable na-

ture, and much of it can be crumbled with the fingers. In many of the samples, which were taken indiscriminately, gold was visible, while in the selected pieces the precious metal was always present in larger or smaller quantities, a good many of the stones showing sufficient metal to yield over 4 ozs. of gold to the ton. The gold generally is very fine, and in many cases it would escape the observation of anybody but an expert; but the series of pan tests made by Mr. Webster were in every case productive of gold. The alluvial deposits seem to be of an exceptionally rich character, and the results of the tests made show that they contain a high percentage of gold; though, of course, until the requisite machinery is put up a large portion of the auriferous matter escapes. Ten samples taken from the bags of pulverised quartz have been submitted to Messrs. Johnson, Matthey, and Co. for assay, with the following result per ton of 20 cwt. of quartz treated:—

	Ounces.		Ounces.
No. 1 .....	Gold 2-800	Silver	0-500
2 .....	4		0-600
3 .....	0-850		0-300
4 .....	2-275		0-500
5 .....	2-750		0-500
6 .....	2-150		0-400
7 .....	1-500		1-800
8 .....	0-900		0-250
9 .....	1-350		0-800
10 .....	2-300		0-550

From these assays it will be seen that even the poorest of the stuff submitted would, if the estimates of the costs be correct, leave a profit on the working, while the richest samples would give a result which would be highly satisfactory to the shareholders.

#### INTERNATIONAL ELECTRICAL EXHIBITION, VIENNA, 1883.

On account of the accumulation of applications, which have risen to 570 within the last few days, the vast rooms of the Rotunda begin to be a little too close. Contrary to the original intention the north-eastern court has also been adapted for placing exhibits. Of the applications mentioned above we only cite those by which the Governments of Foreign States will officially participate at the Exhibition. Such are the Royal Belgian Ministry on Public Works at Brussels; the Royal Danish Navy and War Ministries at Copenhagen; the English Post and Telegraph Administration in London; the French Ministry on War, the Ministry on Public Education, the Ministry on Post Affairs and Telegraphy, and the Police Prefecture at Paris; the Royal Italian Telegraph Administration at Rome; the Imperial Ottoman Telegraph Administration at Constantinople; and the Russian Telegraph Administration at St. Petersburg. Belgium will send the engineer Mr. Eorard to participate at the works of the Scientific Commission, who has been likewise entrusted with the organisation of the Official Belgian Section; further Messrs. Rau and H. Witmeur, Engineers of the Bridge and Street Department. Roumania will officially send Prof. Bacaloghi and Captain Michel Boteanu for studying the Exhibition, and to participate at the Works of the Scientific Commission. From Russia will come the General Telegraph Inspector and Counsel of the State, Mr. Pissarevsky, and the Chief Mechanist and Counsellor of the Court, Mr. Tredeemann, sent by the General Direction of the Imperial Russian Telegraphs as delegates. Further is given Mr. Ph. Welitschko, President of the Commission which has been formed by command of the Russian Emperor for the organisation of a Russian section. The Imperial Russian Polytechnical Society will send as delegates to participate at the Works of the Scientific Commission, Messrs. Oreste Danilowitch Chwolson, Doctor of Physics, and Colonel Wead, Takowlewitch Florensoff, Professor of Chemistry at the Cavalry School of the Emperor Nicholas; as Chief Commissary of the Russian Section Mr. F. L. Crestin, Engineer at the Public Cartridge Factory; as Commissaries the Electrician Mr. A. N. Ludigine, and the Professor of Physics Mr. Jacques T. Kowalsky; and, finally, as Deputy Commissaries Col. Michel A. Saline, Professor of Mathematics in the Imperial Corporation of Pages, Mr. Michel M. Dichenoff, Mine Engineer, and Mr. Serge Nikolajewitch Stijnanoff, Electrician and Editor of the Russian journal the Electricity. From Turkey the General Post and Telegraph Director Mr. Izet Effendi, who has been ordered by the Turkish Government to organise the Turkish section, has nominated as delegates for the Exhibition the President of the Technical Bureaus Mr. Effendi Lacoiné, and his substitute Mr. Raif Effendi.

#### SOUTH-WEST DISTRICT MINING BOARD.

By order of the Secretary of State the annual examination for granting Certificate of Competency as Colliery Managers under the 26 and 27 Section of the Coal Mines Regulation Act, 1872, was held by the official examiners of this board at the Guildhall Chambers, Bristol, on July 10, 11, and 12:—Messrs. C. A. Harrison, M.E., Bristol; W. Needham, M.E., Newport; J. T. Thomas, M.E., Coleford. Business commenced on Tuesday (July 10). Fourteen candidates presented themselves, and produced their authorisation from the Home Office, together with their respective testimonials as to their adaptability, sobriety, and general good conduct, and their having had at least five years' experience in connection with coal mines and colliery work. Previous to the examination the applicants have certain written instructions from the secretary relative to the various subjects that would be placed before them, and therewith he is particularly advised that after entry, and previous to proceeding with his examination papers, he must produce sample plan and section of certain colliery workings made by himself, from his own survey, and the surveying book corresponding thereto. Nos. 1 and 14 were careless in this respect, and, consequently, after a few questions they were unfortunately blocked and disqualified. The 12 competitors were then told their respective number on the list, and that their papers would be placed before them in the following order—from 2.30 to 6 p.m.:—

Maximum degree of merit.  
1.—Subject: Arithmetic, 8 questions ..... 110 marks  
2.—Subject: Surveying and geology, 8 questions ..... 110 "  
On Wednesday (July 11) from 9.20 a.m. to 6 p.m.:—  
3.—Subject: Ventilation, 10 questions ..... 150 "  
4.—Subject: Practical mining, 13 questions ..... 195 "  
5.—Subject: Engineering, 8 questions ..... 105 "  
On the whole 47 questions—each question having a maximum, intermediate, and minimum ratio of merit as 15, 10, 5. The highest standard on every subject being 670 marks; the lowest which would admit the candidate to the *visa voce* or final stage is 330 marks. Nos. 4 and 6 being considerably below this minimum were dismissed. On Thursday, July 12, at 2 p.m., the 10 candidates were admitted one by one so as to test their experience and practical knowledge of mining operations generally by oral proof and demonstration. Providing he is thoroughly up to the mark he may yet score 120 marks, thus making the minimum score for Certificate of Competency 450 marks. Nos. 7 and 9 failed in this respect, but the following gentlemen distinguished themselves remarkably well, and gave great satisfaction to the examiners:—Taliesin Jones, Aberdare, 655 marks; James Jones, Risca, 655 marks; Othwell Hawkins, Pontypridd, 590 marks; Thomas Morgan, Blaenau, 515 marks; James Lewis Thomas, Aberdare, 510 marks; Daniel Evans, Penygraig, 475 marks; W. L. Vaughan, Bedminster, 450 marks; David Evans, Ferndale, 480 marks.

On Friday, July 13, at 12 o'clock, the following members of the board met to receive the report of the examiners, and to discuss other important topics which have for some time been under their consideration—Mr. W. B. Nash, Bath, Chairman; Mr. E. Crawshaw, Forest of Dean; Mr. C. A. Harrison, M.E., Bristol; Mr. W. Needham, M.E., Newport; Mr. J. T. Thomas, M.E., Coleford; Mr. W. Burchall, miner, Beaufort; Mr. D. Williams, miner, Rhymney; Mr. T. Sedman, miner, Ebbw Vale.

Mr. T. Cadman, Her Majesty's representative for the South-west District arrived early, and received a hearty ovation, each member being glad to see him capable of resuming his position at the board, and trust he may long continue to do so. The Vice-Chairman, Mr. E. J. Grice, Newport, was unavoidably absent. The minutes of the last meeting being confirmed, the board unanimously agreed that

The report of the examiners was satisfactory and highly creditable to the respective candidates, and that each one of the eight be recommended to the Secretary of State as worthy to receive his Certificate of Competency as Colliery Manager under the Act.

Resolved—that the next meeting of the board be held at Newport on Sept. 12, at 11.30 a.m. With the usual vote of thanks to the Chairman the meeting closed.

### SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, July 19) writes:—The upward tendency of the warrant market continued until Thursday last, when the disquieting news from Madagascar increased the desire to sell. The price gave way about 3d. per ton. It would be unfortunate if the buoyancy just beginning to appear after so long an interval of depression should be destroyed by political complications. For the week, notwithstanding the holidays at Glasgow, shipments are satisfactory. An additional furnace has been put in blast at Kinneil, making a total of 114 now blowing. Business was done during the past week at the following prompt cash prices:—

Thursday, July 12.	Friday, July 13.	Monday, July 16.
47/8, 47/7, 47/6, 47/5, 47/4, 47/3, 47/2, 47/1, 47/0, 46/11, 46/10, 46/9, 46/8, 46/7, 46/6, 46/5, 46/4, 46/3, 46/2, 46/1, 46/0, 45/11, 45/10, 45/9, 45/8, 45/7, 45/6, 45/5, 45/4, 45/3, 45/2, 45/1, 45/0, 44/11, 44/10, 44/9, 44/8, 44/7, 44/6, 44/5, 44/4, 44/3, 44/2, 44/1, 44/0, 43/11, 43/10, 43/9, 43/8, 43/7, 43/6, 43/5, 43/4, 43/3, 43/2, 43/1, 43/0, 42/11, 42/10, 42/9, 42/8, 42/7, 42/6, 42/5, 42/4, 42/3, 42/2, 42/1, 42/0, 41/11, 41/10, 41/9, 41/8, 41/7, 41/6, 41/5, 41/4, 41/3, 41/2, 41/1, 41/0, 40/11, 40/10, 40/9, 40/8, 40/7, 40/6, 40/5, 40/4, 40/3, 40/2, 40/1, 40/0, 39/11, 39/10, 39/9, 39/8, 39/7, 39/6, 39/5, 39/4, 39/3, 39/2, 39/1, 39/0, 38/11, 38/10, 38/9, 38/8, 38/7, 38/6, 38/5, 38/4, 38/3, 38/2, 38/1, 38/0, 37/11, 37/10, 37/9, 37/8, 37/7, 37/6, 37/5, 37/4, 37/3, 37/2, 37/1, 37/0, 36/11, 36/10, 36/9, 36/8, 36/7, 36/6, 36/5, 36/4, 36/3, 36/2, 36/1, 36/0, 35/11, 35/10, 35/9, 35/8, 35/7, 35/6, 35/5, 35/4, 35/3, 35/2, 35/1, 35/0, 34/11, 34/10, 34/9, 34/8, 34/7, 34/6, 34/5, 34/4, 34/3, 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### SMOKE ABATEMENT.

A meeting of the National Smoke Abatement Institution was held on Monday at the Mansion House, the Lord Mayor, and subsequently the Duke of Westminster, presiding. There were also present the Duke of Northumberland, the Right Hon. G. Cubitt, M.P., Sir Spencer Wells, Sir William Siemens, Sir Frederick Abel, Sir Lyon Playfair, M.P., Sir F. Pollock, Colonel Makins, M.P., Mr. T. C. Horsfall (representing the Manchester and Salford Noxious Vapours Abatement Association), Dr. Farquharson, M.P., General Lowry, C.B., Colonel Fraser, C.B., Dr. Sedgwick Saunders, Mr. Ernest Hart, Mr. Waring, and Mr. G. Shaw, M.P. The report, which was read by Mr. Ernest Hart, the Chairman of the Council, stated that evidence received from many quarters went to prove that the smoke of large towns directly increased the rate of mortality, caused serious damage to property, and involved large expenditure in various ways. The Institution had held a successful exhibition of smoke preventing appliances at South Kensington, which was followed by a similar and equally successful one at Manchester, under the joint auspices of the Institution and the Manchester and Salford Noxious Vapours Abatement Association. A volume of reports on both exhibitions had been published. It contained details of the various tests of apparatus with illustrations, also reports on the chemical aspects of the smoke question. This report had had a considerable circulation, and had received favourable criticism both at home and abroad. After showing the marked discrepancy between the respective efficiency of various kinds of apparatus, the report proceeded to state that a great benefit resulting from this public movement has been the greatly increased use of gas and coke for heating purposes. Marked improvement has been made in open grates and stoves for burning smokeless coal, and one firm alone which exhibited at South Kensington a cheap stove of this class has sold 14,000 of them within two years, thus proving that the public are to a large extent willing to burn smokeless coals if they get suitable stoves at a reasonable price. The report further stated that the use of gas for heating steam-boilers had considerably extended during the past year.

Another mark of progress was afforded in the improved manufacture of coke. The improvement of various forms of mechanical stokers had caused an increased use of them for boiler furnaces, and the Council had been informed by some of the largest manufacturing firms in the Midland Counties and elsewhere that their use had been attended with considerable economy in fuel and labour. The pottery, glass, and brickmaking trades have been considerably benefited by improvements in furnaces brought into notice at the South Kensington and Manchester Exhibitions. Noteworthy progress had been made in the extended use of ordinary coal gas to many trade processes carried on in towns, such as at bakeries, &c. Arrangements had been made in conjunction with the Gas Institute for further tests of all the heating and lighting burners recently exhibited at the Crystal Palace. The report concluded with a statement of the unsatisfactory administration of the law relating to smoke, reiterating that ample proof was available that smoke could be to a greatly increased extent abated, if not entirely prevented.—The Duke of Westminster, in moving the adoption of the report, stated on the authority of experts that the waste in London alone from excessive smoke production amounted to a million a year, and the damage done in various ways by this smoke might be estimated at two millions extra.—Sir Spencer Wells, surgeon to the Queen, seconded the motion, and stated that he did not believe the supposed good arising from the antiseptic property of smoke had any foundation in truth. He believed there was no possible good in smoke; it was an unmitigated evil.—The Duke of Northumberland, in proposing that a Royal Commission should be appointed for the purpose of enquiring into the best scientific means of promoting an abatement of the nuisance and into existing laws affecting the subject, remarked that in his opinion they could only hope for amelioration of the nuisance by influencing public opinion, as it was a difficult subject to legislate upon. There were great anomalies in the administration of the law, and the discrepancies between the amount of fines inflicted was remarkable. In too many cases in provincial districts the magistrates were too much interested in the matter to allow them to be very severe on offenders.—Sir William Siemens insisted upon the superiority of gas over solid fuel.—Amongst the succeeding speakers was Mr. T. C. Horsfall, of Manchester, who testified from experience of the work of the Manchester and Salford Noxious Vapours Abatement Association—a kindred society—to the utility of the work of the National Institution and its claims for support.—Votes of thanks to the Lord Mayor and Duke of Westminster terminated the proceedings.

**ENGINEERING EXHIBITION AT THE AGRICULTURAL HALL.**—A novel invention of much value to engineers may be seen at the Agricultural Hall, Islington, Stand 381, E. PENNING and Co. It consists of the most simple packing for steam, hydraulic, or air pipes, though requiring less material for a perfectly hermetical joint than any at present in use, whilst it has been certified by Sir W. G. Armstrong to have stood the enormous pressure of 4000 lbs. per square inch. Chipping or springing of pipes is by this system entirely dispensed with. By simply unscrewing the flanged bolts all removals or renewals can be effected in a few moments. Those interested should either see the joints at the exhibition or at the office, Abingdon-street, Westminster.

**SOCIETY OF ENGINEERS.**—The members and associates of this society, to the number of about 40, visited on Wednesday the Thames Ironworks and Shipbuilding Company's yard at Blackwall and the works of the Gas Light and Coke Company at Beckton. This was the second of three excursions arranged for the instruction and amusement of the members of the society. The first excursion was to Swindon, and the next will be to Brighton. The party on Wednesday went to Blackwall and Beckton by special steamer. At the former place they were shown over the ironworks by Mr. Hill, managing director, and at the latter Mr. G. C. Trewby, C.E., Engineer-in-chief to the Gas Light and Coke Company, acted as *cicerone*. In the evening many of the members and their friends dined together at the Guildhall Tavern, in Gresham-street, under the presidency of Mr. Jabez Church, F.G.S., there being also present Mr. C.

Gandon (Vice-President), Mr. B. Berridge, Mr. A. F. Phillips, Mr. W. Schönheyder, Mr. W. Macgeorge, Mr. J. Bernays, Mr. H. Hardy, Mr. A. Williams, and Mr. Bartholomew Reed (secretary).

### THE ROYAL SHOW AT YORK.

#### MACHINERY IN MOTION.

Those whose business requires that they should take an interest in pulley-blocks, hoists, and winches will find a large display of such appliances at the stand of Mr. Jonathan Pickering, of Stockton-on-Tees. Amongst his new implements is a hoist with sustaining brake for 5 cwt., and with chains for a 20 ft. lift. The brake is fitted with a check arrangement, so as to sustain the load. He has also a new standard hoist with cage for 5 cwt. This sustains the load, either in lifting or lowering, without the aid of any brake or ratchet cord. A standard hoist for 3 cwt. with barrel, suitable for grainery or malting, and a bracket winch for 3½ cwt., which sustains the load, and whose handle cannot fly round, also claim attention as new implements. Steam-pumps are shown by Messrs. Hayward, Tyler, and Co., London. One of them is capable of raising 18,000 gallons of water per hour, another 7000 gallons per hour 200 ft. high, and a third will feed a 40-horse boiler with hot water. On the same stand are two hot-air engines; the one capable of raising 600 gallons of water per hour 70 ft. high, and the other suitable for pumping from deep wells. The Rider patent household pumping-engine, actuated by hot-air, is one of the chief features of the stand. It is an ingenious and simple little apparatus, and is very extensively used by country gentlemen in raising the water required for the use of their houses and gardens. There are no valves and no pistons in the construction of the engine. Steam-engines also form a part of the exhibits. A neat vertical engine drives one of the Diamond type of double-acting pumps. Another, a small horizontal engine of the Bramah type, is also on this stand, but not at work. The well-known stone-breaker, manufactured at the Soho Foundry, Leeds, in accordance with the Blake-Marsden patent, may be seen breaking 6 tons 5 cwt. per hour by 5-horse power. By the side of it is a pulveriser, which will crush about 3 cwt. per hour of all kinds of minerals and ores to any degree of fineness. There is also a stone-crusher on the stand with quadruplicate reversible jaws for reducing stone to fine gravel. Messrs. Bradley and Craven, Wakefield, exhibit a new brick moulding and pressing machine, by which any material capable of being made into bricks can be manipulated, moulded, and pressed in the state of dryness with which it leaves the earth at the rate of 12,000 per day, and the bricks delivered dense enough for immediate transfer to the kilns for burning. They have also a new brick press designed for pressing perforated and other bricks made by the plastic process. Mr. T. C. Fawcett, of Leeds, has several brick-making machines on view. One of them is new. It makes a brick from shale or clay in a plastic or semi-plastic state at one operation, and it is said to be able to turn out about 12,000 per day. The pug shaft has an intermittent motion, thereby reducing the wear and tear of the machine. He also exhibits a new safety-valve, which blows the steam into a box that communicates directly with the fires, and thereby damps them down and saves fuel, or, if neglected, puts them out. In this way the noisy blowing off of the steam is rendered unnecessary. Another new product of the exhibitor's works to be found on the stand is a coal-baring and shot-hole drill combined, which is said to do away with the necessity of spragging. A variety of machines for brick, tile, and drain-pipe making, as well as of brick presses, are shown by Messrs. John Whitehead and Co., of Preston. The firm has been very successful in the production of this class of machinery. The catalogue states that the Society has awarded them its first prize at every trial meeting since 1848.

Messrs. Crossley Brothers, of Manchester, have an attractive display of their Otto gas-engines, beautiful pieces of mechanism, and remarkable for their noiseless motion. One of them is new. It is 12-horse power nominal, indicating 30-horse power, and is worked with Dawson's patent economic gas at an expenditure of 1-4lb. of coal per horse power per hour. A straw-compressing machine on the next stand, belonging to Messrs. John H. Land and Co., London, attracts the attention of a good many visitors. Messrs. J. and H. McLaren, of Leeds, exhibit, amongst other implements, four new traction engines, which are more particularly noticeable on account of the firm's new patent spring arrangement, whereby the jar of the engine over rough roads is greatly reduced and a saving of wear and tear effected. They also show the original pair of spring wheels, which they say have passed over about a thousand miles of the roughest roads in England. An implement which will no doubt receive the attention of farmers is a new horse hoe, shown by Messrs. S. Corbett and Son, Wellington, Salop. It is somewhat different in design and construction from other implements applied to the same purpose. Wrought-iron cutters with upright arms are entirely dispensed with, a cast-iron skim turned up at the sides being substituted. It is claimed that by this contrivance blocking or choking is impossible. The skim is cast in two parts, and may be made to suit any width of ridge, and the edge of the cutting surface is serrated instead of plain, thereby causing it to take firm hold and cut off any thistle or other strong weed with which it may come into contact. The pitch of the frame can be immediately altered when the point becomes worn without moving the wheel, and the scuffle runs steadily. Another important feature is a revolving barrow, which forks out all the weeds and rubbish, and leaves them on the surface quite loose and exposed. By this means also the draught of the implement is considerably reduced, and the work more cleanly done, as the rubbish is not gathered and deposited in heaps. The same firm show a new combined disc root cleaner and pulper. It removes the dirt or small stones from the roots before they are conveyed to the pulper, and is constructed to prevent breakages in case of stones being thrown in with the roots. It is said to save a good deal of labour. Two appliances to be seen in operation at the stand of Messrs. Long and Apin, Bristol, will interest brewers. The one is a combined gyle-rouser and aerator, and the other a combined attenuator, automatic gyle-rouser, and aerator. Great advantages are said to be secured by the use of them.

Messrs. James Walworth and Co., of Bradford, exhibit a new grain-dryer, which they say differs from similar appliances in one or two important ways. The grain does not pass through the heated surface in bulk, which prevents the steam and moisture from passing away as it is produced. It is simply heated and a great part of the moisture retained and absorbed into the wheat or other grain after passing into the sacks. Immediately the steam is produced from the grain by the heat of the tubes, it is drawn away by the suction fan at the discharge end. This fan has a direct communication through the centre of the steam chest into the revolving cylinder, as shown by the transit of the arrows into the fan. The outer eye draws a current of air through the grain as it falls down the discharge spout, drawing with it light particles and unsound grain. The power of the fan can be reduced simply to draw away chaff and dust. The next stand, occupied by Messrs. Thomas Robinson and Son, Rochdale, will also interest millers. They exhibit a newly designed double roller mill, the hopper of which is so arranged that when the flow of middlings becomes excessive, the feed on to the rolls is increased, thus preventing the hopper from becoming choked, and thereby rendering the feed completely automatic. The feeding apparatus is so connected with the rolls that by simply moving a lever the latter may be drawn apart and the feed stopped instantaneously. The rolls themselves can readily be adjusted to the greatest nicety. Alongside of the machine is another new one—a double height roller mill, with improved automatic feed. Here the rolls are placed one above the other. This system is said to be well adapted for smooth rolls when great pressure is required. The hopper arrangement is the same as in the other, and the top rolls are capable of a nice adjustment. Other appliances for use in the corn mill are shown at the stand of Messrs. W. R. Dell and Son, of London. One of them is called the Rounds sectional roller mill. The advantage claimed for it is that it is perfectly automatic, and, though on a small scale, may be worked as economically as the largest mill. It is adapted to making the higher qualities of flour, and by means of it the English miller is enabled to compete against the Hungarian and better class American flour without going to the expense of altering his mill generally. The firm also exhibit a machine designed for the separa-

tion of small stones, gravel, &c., from wheat and other grain. A new bran roller mill is shown by Messrs. Hind and Lund, Preston. They say that with it millers may grind with stones much higher, make more perfect middlings, and a superior quality of flour; also that the product from the rolled bran is of a superior kind. By a peculiar device each flake of bran is conducted in a flat position between the points of contact of the rolls, thereby giving a large percentage of the product from the rolled bran in middlings, and at the same time keeping the bran broad. Several other new appliances for similar work are exhibited by Mr. C. Hopkinson, of Retford. These comprise three flour-dressing machines, a sieve purifier for middlings, two rolled mills for middlings or bran, a roller mill for cracking wheat, and a separator and duster for offals. Messrs. Wm. Gardner, Gloucester, show various improvements in the Odell roller mills, including a noiseless belt driver, so arranged that the machine can be instantly stopped by means of tightened pulleys; devices for simultaneously spreading the rolls apart and shutting off the feed by a single movement of the lever; and an arrangement of tie rods made in two pieces, connected by a barrel containing the tension spring, whereby the latter can be so adjusted as to give the desired pressure and elasticity to the rolls, and the adjustment retained without being affected by the subsequent sitting of the rolls. A new grain-cleaning and drying apparatus is exhibited by Mr. E. Keighley, of Scarborough. It consists of a vessel, 6 ft. in diameter, made to revolve in a diagonal position on an axis, and steam and hot air are admitted into hollow appliances inside, amongst which the grain is constantly rubbing. An improved portable grinding mill, which it is said can be more easily adjusted than similar appliances, is shown by Messrs. Teesdale Brothers, Darlington. Messrs. Robey and Co., of Lincoln, exhibit what seems a very substantial thrashing machine. The frame is of wrought angle iron on a trussed principle; it is thereby stronger than any wood frame, truer and more rigid, and not so liable to be strained or twisted in travelling over rough roads.

Messrs. Priestman Brothers, Hull, show in operation their dredger, excavator, and elevator; it is self-propelling under its own steam. They likewise exhibit in working order the dredger they have specially designed for cleaning lakes, ponds, and for deepening small streams, ditches, &c. Messrs. F. and J. S. Bust, of Winterton, Brigg, show their new portable ensilage cutter, and also a new appliance for evenly distributing salt on chaff as it falls into bags. It is intended to be fixed on to the elevators of a chaff-cutting machine, and is so arranged that it can be put in and out of gear without stopping the machine. The firm have also provided a new elevator for delivering prepared chaff into the floors of barns and chaff houses up to 15 ft. high. They have likewise on view their diaphragm and valve for stack cooling. By means of it the operator may concentrate the whole power of the fan on the lower and most solid part of the stack. The York Engineering Company exhibit a differential rotary apparatus for blowing, exhausting, and ventilating. It is said to be suitable for the delivery of large volumes of air or gas either at high or low pressure. Some new screwing and tube-cutting machines are shown by Messrs. John Cowley and Son, of Hyde. Messrs. Newton, Chambers, and Co., of Thorncliffe, are exhibiting their well-known cooking ranges, as well as several garden rollers.

### THE MINERAL RESOURCES OF IRELAND.

The exceedingly questionable policy, if not absurdity, of attempting to remedy the present evils of Ireland by encouraging emigration has been more than once affirmed in the *Mining Journal*, and the more experience is gained the more the accuracy of this view becomes evident. That the Celtic race are more excitable, and more easily excited, than the Teutonic can scarcely be questioned, but it would be difficult to find any more ready than the Celt to appreciate and reciprocate kindness and straightforwardness, or more willing to labour hard for reasonable remuneration. He is only difficult to keep within the necessary rules of discipline when placed under the control of those who are incompetent to manage labourers of any class, and under an intelligent employer he can quickly be made the most desirable and agreeable of workmen. Had but one-half of the capital that has been expended during the past half-century in assisting emigration been judiciously

ronseems to have been extensively worked in various places in former times, as at Coombola, near Bantry Bay; at Aghadown, near Roaring-water Bay, and at several other places on the coast; at Dondaniel, on the Bandon river; at Araglin, about eight miles north-east of Fermoy; at Tallow, and elsewhere.

The works were abandoned when the natural woods, which supplied the fuel, were used up. The metal, being smelted with wood, was of excellent quality, and esteemed equal to Swedish iron. In Bere Island there is specular iron ore. In the Schull district iron occurs in nearly all the quartz veins and strings, generally micaceous ore or red hematite. It is found as mundic (iron pyrites) in some of the lodes in that vicinity, and also near Danmanway. It occurs also as bog iron ore. In this country iron is generally found within short distances of large peat bogs, which only require to be converted into condensed fuel and charcoal to make the manufacture of iron and steel again profitable. Coal is plentiful in the district around Kanturk. Anthracite, sometimes containing iron pyrites; culm, a laminated coal, crumbling down on exposure to the air, used for burning limestone; and pindy, a shale sometimes sufficiently carbonaceous to be used as fuel. Ironstone and wavelite also occur. All the marbles of this county are of the variegated kind, of which there is a great variety. Deep black, near Churchtown and Doneraile; purple and white, at Churchtown, near Michelstown, Little Island, and near Middleton; blue and white, near Churchtown; yellow and purple, near Michelstown; grey, Carrigaline, Castlemartyr, Cloynce, Shanballymore; blue and white, Castlemartyr; pale brown, Kilkree. In the manufacture of mantlepieces, fenders, slabs, tables, tiles, columns, &c., as well as every description of monumental and ecclesiastical designs, the numberless varieties of marble of this county could be blended together in an endless variety of attractive contrasts.

The utilisation of the enormous water-power, now running almost to waste, would reduce the cost of manufacture to the smallest dimensions. Slates for roofing, near Bandon, Durrus, Bantry, Schull, Innerskerkin, Drimoleague, Dunmanway, Glandore, Rosscarbery, Galley Head, Clonakilty, Timoleague, Kinsale, Old Head Kinsale, Nohoval, Ringabella Bay, &c. The slates in the neighbourhood of Bantry are the exact counterpart of the Welsh. Slate quarries are worked near Rosscarbery. Of the other useful products the principal are—limestone, flags, clays for pottery and brickmaking, fuller's earth, ochres, magnesite, peat, calcareous sands for manuring land, sands for building purposes, &c. The mineral waters are mostly chalybeates (as near Castlemartyr, Bandon, Kanturk, Macroom, and elsewhere), and the thermal springs about Mallow.

The West Cork mines and mineral deposits are very ably treated of by Capt. W. Thomas, M.E., an old and valued correspondent of the *Mining Journal*, and a sound authority on Irish mining matters, who states that in the western part of the county of Cork there are four great bands of parallel lodes and veins, or copper zones, running inland in an east and west direction. At the Browhead commences the south parallel range of lodes, which are traceable to Roaring-water, a distance of about 20 miles. This great band of copper lodes is seen not only in the cliffs at Browhead, but also at Crookhaven, South Schull (where valuable beds of ochre and peroxide of iron occur), Coosheen, Ardenteenan, Dereenatra, Ballycumisk, Cappagh, Killoe, and Roaringwater. The ores of this district yield a high percentage of copper, cargoes of which having been sold in Swansea at 38s. per ton, and some of the lodes yield from 26 ozs. to 40 ozs. of silver per ton of ore. At Coosheen Mine, remarkably valuable and beautiful specimens of "malachite" were found—these were quite equal in value to Russian or Australian malachite. At South Schull, in the cliff at the west side of Schull Harbour, there is a valuable freestone quarry, the colour and quality of which is equal to Bath stone. From partial and superficial trials made at the Browhead, Crookhaven, Coosheen, Dereenatra, Ballycumisk, Cappagh, Killoe, and Roaringwater, copper ores were raised and sold of the value of 150,000l.; but at present, from causes which need not be mentioned, none of these mines are being worked. Here is a legitimate field for the profitable investment of capital. This great copper zone, if judiciously, perseveringly, and economically worked, would yield a vast amount of wealth, and give reproductive employment to the surrounding labouring population.

The second parallel range begins at the Mizen and Three-Castle Heads. The outcrop of a large copper lode is seen at the Mizen Head, and superficial trials were made long ago on it, it is said, by the late Colonel Hall. The outcrop of lodes are also seen at Three-Castle Head. Those are traceable inland, and at the north side of Mount Gabriel, at Letter; they were opened slightly by Colonel Hall, and copper ore and green carbonate of copper discovered. Still further east in this mineral range, near Ballydehob Church, a mine was also opened by Colonel Hall. About a mile to the north-east of Mount Gabriel, on the western slope of Mount Corin, on the property of the Earl of Bandon, there is a valuable mine of the sulphate of barytes; it occurs commercially pure, yielding 98 per cent. of baryta. This article, when ground to an impalpable powder, is largely consumed by cotton manufacturers, by paint and colour makers, who mix it with lead and zinc in the manufacture of the most permanent white known, and by makers of paper, porcelain, pottery, plate-glass, and chemicals. Splendid mirrors may be seen at Castle Bernard, which were manufactured from the produce dug out of Lord Bandon's barren rugged mountain at Dereenalamane.

These works are now in active operation by English capitalists, under the superintendence of Capt. Wm. Thomas, and machinery is about being erected for grinding and manufacturing the article on the spot. This will afford employment to all the people of the district. The third parallel copper zone begins at the Sheephead, which divides Dunmanus Bay from Bantry Bay, east of which, in the Killohane mountains, are valuable mines of copper, silver, lead or galena, and iron pyrites, which is auriferous and argentiferous. This great mineral district was recently examined by one of the most eminent experts in the United States of America, and from his knowledge of California, Colorado, Nevada, &c., he has recommended capitalists in New York to invest any amount of capital in the development of those mines; and in order to complete arrangements, he left recently for New York in the City of Richmond. Following the Killohane mountain range, on the south shore of Bantry Bay, we find the silver-lead mines of Kellovinogue and Rooska, which, from limited superficial operations yielded good returns of ore. At Lisheam, to the east of Rooska, on the then property of the Earl of Bantry, near the public road, is a remarkable outcrop of a great mineral lode, which contains argentiferous copper ore (true fahlerz), argentiferous arsenical pyrites, and other valuable minerals; the fahlerz ores yielding from 200 to 350 ozs. of silver per ton of ore, and 35 per cent. of copper. The fourth great copper zone begins at the Dursley Head, which divides Bantry Bay from the Kenmare Bay. East of the Dursley Head, at Ballydangan Bay, is the celebrated Berehaven Copper Mine, which has yielded millions' worth of copper ore. The great mountain range (no doubt full of minerals) east of Berehaven mines is unexplored.

The four great copper zones herein hastily sketched afford ample scope for the safe and profitable investment of 1,000,000l. The containing rocks, in which these great metalliferous bands of lodes and veins occur, consist of clay-slate, porphyritic rocks, greenstone formations, oblique lodes, cross-courses, and massive rough slaty grit rocks, quartzose veins, massive quartz rocks, with micaceous and chloritic schists. These are known and proved to be the most metalliferous rocks in all great and profitable mining districts. The judicious outlay, therefore, of capital is only required to make West Cork one of the richest mining districts in Europe. The natural facilities and advantages for carrying out the works are unsurpassed. Mines may be worked for years without machinery. In West Cork are some of the finest and grandest harbours in the world—rivers running waste into the ocean which might be applied to drive any amount of machinery. A population ready, willing, and anxious to work, and, if employed, would be happy, peaceable, and contented. The writer of this paper has been in contact with the poorest of the working population in the most remote districts of West Cork for over "40 years," and never received insult from man, woman, or child. He has traversed wild and lonely districts at all hours of the night, and never had an idea of being afraid of any man. He is not a landlord or the owner of mines, but from his long experience of

mining in Ireland and different parts of England, he is certain that if the mines of West Cork are honestly and properly developed they will rank in value with the best mines in the United Kingdom. West Cork contains also valuable slate and flag quarries, and sufficient paving sets of the most durable material to pave all the streets in Ireland. There is, therefore, no necessity to send to Wales for paving sets to pave Irish streets.

A romantic walk from Crookhaven to Browhead affords splendid views of Barley Cove, the White Strand and lofty cliffs facing the Atlantic Ocean. Returning from Browhead to Crookhaven, you then proceed by a wild and interesting road by the beautiful Bay of Dunmanus to Durrus, which is situated at its head. Durrus is a neat little village, and under the fostering care of the late Earl of Bandon, became from a few wretched hovels a pretty little town, with a good hotel, dispensary, post office, telegraph office, &c. The drive from Durrus along the shore of Dunmanus Bay, to Killohane, nine miles, and Sheep's Head, 14 miles, is grand and beautiful. A new road has been made from the "Holy Ground," Killohane, winding up the side of Killohane Mountain, on the top of which, 1000 ft. above the sea level, is probably one of the grandest views in Europe. Beneath your feet is the "Noble Bantry Bay," the broad Atlantic, Sheep's Head, Dursley Head, Castletownberehaven, Bere Island, Adrigole, Glengarriff, Whiddy Island, and the great and grand range of Kerry Mountains. From Durrus to Bantry is six miles. Passing from Bantry to Glengarriff, about half way, at Droumkill, there is a slate quarry at work, and when more extensively opened will, no doubt become a valuable property. This slate and flag quarry is on the property of the Earl of Bantry, and under the superintendence of Capt. J. B. Eddy. The beautiful scenery of Glengarriff has a world-wide fame. The most able writers have failed to do justice to beautiful Glengarriff.

Tourists in general follow the "beaten track," and "do" Glengarriff and Killarney in a couple of days. They have no idea of the beauty and grandeur of the wild and romantic scenery of West Cork. But it may be asked how many thousands are there in the City of Cork who have never seen it? Irish invalids and others go to the South of France, Italy, Algiers, anywhere rather than visit the warm, sunny, and sheltered nooks of West Cork. How, then, can strangers be expected to visit those spots when they are completely ignored by Ireland's own citizens? Strangers or residents in Cork, or other cities and towns, will find excellent roads from Skibbereen to Crookhaven, also good accommodation at Schull, Goleen, Crookhaven, and Durrus, while at the "holy ground," Killohane, delicious sweet milk can be obtained, which, with a dash of whiskey in it after a mountain excursion, is both refreshing and invigorating. Cars, covered and open, can be procured at Skibbereen, Schull, &c. Many parts of West Cork are barren and rocky, but Nature has made abundant compensation in the vast mineral treasures contained underneath a barren surface.

#### STRIKING OIL.

Mr. E. V. Smalley contributes to the *Century Magazine* a most interesting and instructive paper on the production of oil in America. The known and defined petroleum region in the States is confined, it appears, to a country about 150 miles long, with a varying breadth of from 1 to 20 miles; and the yield from this large area, which in 1881 amounted to 26,950,813 barrels, reached 31,398,700 barrels in 1882. It must not be supposed, writes the author, that the oil-bearing sandstone stratum underlies the whole region. It is found only in spots, patches, and belts, and there are no surface indications to show where it can successfully be sought. The entire productive territory covers an area of only 189,000 acres. The outlines of a producing district are established only by experiment, and new districts are discovered by wasting sums of money on "dry holes." On Oil Creek the first wells struck the oil-bearing sandstone at a depth of 600 ft. In the Butler and Clarion fields the wells are about 1400 ft. deep, in the Bradford field from 1100 to 2000 ft., in the Allegheny field from 900 to 1400 ft., and in Cherry Grove 1000 ft. The variation of depth in the same field is caused by the hills. The oil sand-stratum varies in thickness from 5 to 30 ft. It is thickest in the Bradford field. There it is dark-coloured and fine-grained; elsewhere it is of lighter colour, and more porous.

There are no streams or ponds of petroleum in the earth, as was once supposed. The sandstone is saturated with the oil, and a strong pressure of gas forces the fluid through the porous rock and up to the surface, when a hole is drilled down to it. After the gas pressure is relieved a well is pumped, sometimes for a few weeks only, sometimes for years. Of all forms of property an oil well is about the most uncertain. No one can predict how much it is going to yield, or how long its life will be. Thus the whole business of petroleum production has always rested, and must always rest, upon a basis of speculation far more venturesome and less stable than is known in the production of any other important commodity.

Boring for petroleum is less than a quarter of a century old. It dates from Aug. 30, 1859, when Col. E. L. Drake struck oil on the Drake farm on Oil Creek. In 1859 Col. Drake's well produced about 2000 barrels of oil; in 1860 new wells brought the total yield up to 500,000 barrels; in 1861 it was 2,113,609 barrels; and in 1862 3,056,690. The production of crude petroleum fell off in 1863, 1864, and 1865, but the discovery of the new Tidouste district and of the famous flowing wells of Pithole brought it up in 1866 to 3,887,700 barrels. The Butler and Clarion counties fields, and fresh discoveries in Venango County, ran the production up steadily during the following years, until it reached 10,809,852 barrels in 1874. Then came two years of decline, the elder wells giving out and the newer one yielding less and less. In 1875 the Bradford field was discovered. Its development proceeded so rapidly, and it proved to be of so great extent, that in 1880 its yield was double that of all other fields in 1874, and about six times as great as all others at that time. Of the 26,000,000 of barrels produced in 1880, over 22,000,000 came from the Bradford district.

The Allegheny district was opened in 1881, and now ranks next to Bradford; and the phenomenal Cherry Grove field in Warren county had its rise and fall in 1882. A number of small districts, or pools, in Warren, McKean, and Venango counties, was opened between 1875 and 1881. For sudden and enormous effect upon values, the Cherry Grove excitement of last summer was without parallel in the history of the petroleum trade. It surpassed the famous Pithole furor of 1865. On May 17 "646" struck oil, and 4000 barrels were run the first day. In a few days the value of oil suffered a shrinkage of \$30,000,000. Crude petroleum tumbled from 85 cents to 49 cents. Within a brief period the hemlock woods of Cherry Grove township were alive with men and teams, hauling boilers, engines, drilling tools, lumber for derricks and shanties, kegs of beer, boxes and barrels of provisions, furniture—all the equipment, in short, of a new settlement. Before the end of June two bustling towns had sprung up—one called Garfield, in honour of the martyr President, and one Farnsworth, for the owner of the farm where the wonderful well was sunk. Land that had lately been sold at \$4 an acre to pay the taxes changed hands in five acre tracts at from \$500 to \$1000 an acre. Hotels, stores, machine shops, saloons, and a theatre sprang up as if by enchantment. In August the Cherry Grove field produced 40,000 barrels a day; but from that maximum it steadily declined, and when the writer visited it in October the daily yield from all the wells was less than the yield of 646 during the first 24 hours after it commenced flowing.

Many wells were abandoned, and the tools and machinery were being removed to other fields. Even under the discouragement of the rapid collapse of the district, however, new wells were being sunk. Probably the field will yield 2000 or 3000 barrels a day for some years to come from a hundred wells producing a few each; but its importance has gone, and with it the fortunes of hundreds of eager speculative men, who rushed in to share the profits of the big strike. . . . It costs about 80 cents a foot to sink a well by contract. The cost of a finished well, with apparatus complete, varies from \$3000 to \$4000, according to the depth at which the oil stratum is found and the expense of getting the engine and boiler on the ground. If a well proves a dry hole, or fails to yield enough oil to pay for pumping, and the owner removes the machinery to other ground for a fresh experiment, he is out of

pocket from \$1000 to \$1500. In the whole Pennsylvania and New York field the number of producing wells is at this time not far from 20,000, of which about 13,000 are in the Bradford district. The number of dry holes and exhausted wells no man has endeavoured to compute. It is a common saying in this region, however, that since 1879 more money has been put into the ground than has ever been got out of it. No consideration of the general interest of the trade or of the risk involved in sinking new wells checks the business of boring.

Production constantly runs ahead of consumption. It is useless for the newspapers in the oil country to show how much more prosperous the trade and all dependent upon it would be if the price of crude petroleum were kept up to a dollar a barrel by limiting production. As soon as the price goes up high enough to be fairly remunerative, hundreds of new wells are sunk in old territory, and "wild catting" becomes active. Mr. Smalley enters into a variety of details, which are well worth reading, and explains more particularly the apparatus used in the sinking of wells, the manner of transporting and storing the oil after it is raised, the principle of insurance that obtains, and some peculiar characteristics of the "oil cities." He also treats of the proceedings at the oil exchanges, and concludes an instructive and carefully prepared paper by the following remarks as to what is the future of the petroleum business:—

With a productive territory virtually confined to a few small strips and spots in six counties in Western Pennsylvania and New York, and an inexorable law of rapid exhaustion applying to all wells, the time would seem to be close at hand when this great blessing, the cheap light of the whole civilised world, would fail. Still, the history of the business in the short period since it began has been one of constant expansion. New fields have invariably been discovered when the yield of the old ones began to decline. Oil men have confidence that there is plenty of undiscovered territory yet to be found. Providence they say would not bestow so great a gift upon mankind to withdraw it when its use had become universal, and the need of the human race for its benefits the greatest. Scientists may say that this view is based on an optimistic or pietistic theory of the universe that will not stand investigation. So far as the great stores of fuel and light—the coal and the petroleum—are concerned it has, however, held good thus far. They have not failed. If the oil of the rock is destined to run dry the chemist will perhaps be ready by the time it is exhausted to produce a cheap illuminator from water.

#### UTILISING PARLIAMENTARY POSITION FOR COMMERCIAL PURPOSES.

An instructive discussion took place in the House of Commons yesterday (Friday) afternoon on the consideration of the Hull, Barnsley, and West Riding Junction Railway and Dock (Interest) Bill, which should induce the Legislature to pass a law prohibiting Members of Parliament from speaking or voting on a bill in which they are pecuniarily interested. It is customary for a judge even if but indirectly interested in a case brought before his court to withdraw that there may be no shadow of suspicion that the decision is influenced by personal considerations, but it seems that Members of Parliament have neither the delicacy nor the honour to adopt so gentlemanly a course. Sir Joseph Pease moved that the bill be considered as amended upon this day three months. He said this bill involved a payment of interest out of capital far outside what was permitted by the Standing Order recently passed. If this bill were passed it would do away with all respect for the statute law and for the Standing Orders of the House, and would deal a death-blow to the upright, honest, and straightforward dealings which characterised this country in matters of trade. Notwithstanding an injunction which had been issued by the Master of the Rolls, forbidding the payment of interest out of capital by this railway company, it found means to induce the contractors to issue dividend warrants. When the company asked for this bill they knew what the law was, and they had defied the law and made arrangements to get behind it, looking to the passing of the bill to cover their illegal proceedings.

The amendment was seconded by Mr. Cropper, who remarked that the bill went far beyond what was contemplated by the House in passing the Standing Order. Colonel Smith thought the House would hesitate before it upset the decision which had been arrived at by the Chairman of Committees after due consideration. Sir J. Pease was a director of the only railway which was in direct opposition to the one now in question, but his action to-day would injure his own railway more than the Hull and Barnsley. Sir A. Otway said he had sought the advice of the Board of Trade, and came to the conclusion that under the circumstances the relief sought by this bill ought to be granted. One result of rejecting this bill would be that from 8000 to 10,000 men engaged in an important undertaking would be thrown out of work, and that was a serious consideration with him. The fact was that the hon. baronet was one of those who opposed all enterprises on the part of people who were not so well established as himself.

The remarks of Sir A. Otway were received with Opposition cheers. Mr. T. Collins supported the amendment, and Mr. C. Wilson said that the question in this case was whether the port of Hull should be relieved from the monopoly from which it has suffered for a great number of years. The entire trading community of the district would be benefited by the passing of the bill. It was too bad that private interests should be paraded before the House on public grounds. Mr. Giles said the present docks at Hull were not capable of accommodating the large ships now in process of construction. If the payment of interest out of capital was stopped, they might say good-bye to all great public works. Upon the House dividing the numbers were—for the amendment, 124; against, 109; majority, 15. When the handing of the paper to Sir J. Pease showed that he had carried his amendment there was great cheering, and for some moments he was unable to read the figures. Upon hearing the numbers the House renewed the cheers.

**AN ELECTRICAL LAUNCH.**—A launch propelled by stored electricity made a trial trip between the Temple and Greenwich on Tuesday, being one of the first instances of the use of this motive power thus applied. The launch, which is only 40 ft. in length, was built of galvanised steel by the Messrs. Yarrow and Co., of Poplar, and the propelling power is found by Messrs. Siemens' dynamos, placed under the flooring at the stern of the boat, which is raised there about 8 in. The electricity for giving motion to the dynamo is obtained from Faure-Sellon-Voelckmar accumulator cells, supplied by the Electrical Power Storage Company, placed under the flooring, where they not only do not occupy space available for passengers, but are useful in forming ballast. There is storage sufficient to give very high speed for six hours, or a longer time with a medium speed. On the ordinary launches the machinery and attendants occupy the larger and better parts of the vessel, but on the one tried on Tuesday the only machinery seen was the steering gear, and one man steered and managed the whole, there being room for more than 40 persons. There was in the travelling no noticeable vibration and the absence of smoke was not only apparent to the travellers, but to the workers on ships in the Pool, who hailed the little craft with the query as to where the funnel was. The boat arrived at Greenwich in three-quarters of an hour. The makers present the craft as possessing qualities especially adapted for warfare, for she is noiseless, is ready in a moment when the accumulators are once charged; and the electrical power is easily obtainable on board ship from the engine, or from water-wheels. The trial was quite successful, and Mr. Yarrow, representing the builders, and Mr. Collett, representing the Electrical Power Storage Company, were congratulated on the result of the day.

**TREATING SOLUTIONS OF METALLIC SALTS FOR THE REMOVAL OF IRON IMPURITIES.**—In order to separate from the solutions of metallic salts the admixture of iron which generally occurs therein through the method of their manufacture, Mr. F. C. GLASER, of Berlin, proposes a process which consists in adding to the said solutions for this purpose certain antimony compounds, or stannic acid, the latter being regained by regeneration and thus rendered available for repeated operations. The process, which is applicable for

# THE GRASKOP (TRANSVAAL) GOLD MINING COMPANY (LIMITED).

ISSUE OF 100,000 TEN PER CENT. PREFERENCE SHARES OF £1 EACH.

The Preference Shares are entitled to a cumulative Preferential Dividend of 10 per cent., with further advantages as to dividend as explained in the prospectus.

Payable as follows—viz., 2s. 6d. on application, 7s. 6d. on allotment, and the balance by instalments of 5s. each at intervals of not less than two months each.

NOTICE IS HEREBY GIVEN, that the LIST OF APPLICATION for SHARES will CLOSE on TUESDAY next for LONDON, and on WEDNESDAY for the COUNTRY.

31, Lombard Street, London, E.C., July 19, 1883.

By order, W. H. LEE, Secretary, pro tem.

Samples of quartz and gold from the company's property can be seen at the offices as above.

## The Graskop (Transvaal) Gold Mining Company, Limited.

Incorporated under the Companies Acts, 1862 to 1880, whereby the liability of each Shareholder is limited to the amount of his shares.

CAPITAL, £300,000,

In 100,000 Preference Shares of £1 each, and 200,000 Ordinary Shares of £1 each.

The Ordinary Shares are taken by the vendors in part payment of the property. The Preference Shares are entitled to a cumulative preferential dividend of 10 per cent., with further advantages as to dividends as explained in this prospectus.

ISSUE OF 100,000 TEN PER CENT. PREFERENCE SHARES OF £1 EACH,

Payable as follows—viz., 2s. 6d. on application, 7s. 6d. on allotment, and the balance by instalments of 5s. each at intervals of not less than two months each.

### DIRECTORS.

ARTHUR LOFTUS TOTTENHAM, Esq., M.P., Glenfarne Hall, Enniskillen, CHAIRMAN.

W. SMETHURST, Esq., J.P., The Garswood Hall Collieries Company (Limited) Wigan, Liverpool, and London.

Major E. J. CHARTER, 9, Nevill Square, South Kensington, S.W.

W. M. FARMER, Esq., Member (for Cape Town) of the Cape of Good Hope Legislative Assembly (Wm. Anderson and Co., Cape Town and Port Elizabeth).

FREDERICK R. BULLOCK, Esq., 35, West Cromwell Road, South Kensington, S.W., Chairman Upper Assam Tea Company (Limited).

BANKERS—CAPITAL AND COUNTIES BANK (LIMITED), 39, Threadneedle Street, London, E.C., and Branches.

CONSULTING ENGINEERS—Messrs. RICKARD BROTHERS, 58, Lombard Street, London, E.C.

SOLICITORS—Messrs. KING and PETO, 16, Abchurch Lane, London, E.C.

AUDITORS—Messrs. GOOD, DANIELS, and CO., 7, Poultry, London, E.C.

SECRETARY (pro tem.)—Mr. H. W. LEE.

REGISTERED OFFICES—31, LOMBARD STREET, LONDON, E.C.

### PROSPECTUS.

1.—This company has been formed for the purpose of purchasing the lease and concession of the mining rights of, and further developing, an extensive and valuable gold property, known as Graskop Farm, in the South African Republic (Transvaal). It is about four miles from the mining town of Pilgrim's Rest. The property is reached from the sea-coast at Delagoa Bay by a good wagon road about 120 English miles in length, or from Cape Town in 10 days by rail and post-cart by way of Kimberley as far as a point within 30 miles of Graskop, to which a good road is constructed, and from Durban, Natal, in about six days by railway and post-cart. The property may fairly be described as situated in the centre of the best known and richest of the gold fields in the Lydenburg district of the Transvaal. To the north are the well-known farms of Berlin and Lisbon, in which the South African Syndicate Company are interested. Immediately adjoining both on the north, east, and west, the Graskop Farm is bounded by the gold bearing properties acquired by the Transvaal Gold Exploration and Land Company, and to the south is the rich Spitzkop district.

2.—The mineral wealth in gold in the Transvaal is, of course, well known, and from the reports which have been made on the Graskop Farm the directors are of opinion that they have secured one of the best properties ever likely to come into the market.

3.—The survey of the Government land surveyor gives the area of the property as 10,040 English acres, and it lies at varying altitudes of from about 4500 to about 6500 ft. above the level of the sea. The discoveries already made warrant the belief that gold is distributed very generally over the estate, and the surface being diversified by high and low lands, is remarkably well adapted for mining operations, which have already been carried out with considerable success by a few independent miners who worked under the system of Government licenses. In the high lands or terraces are found numerous gold veins in a quartz formation, whilst in the lowlands there are abundant alluvial gold deposits, as well as ample supplies of water for hydraulic purposes, and for driving the machinery necessary for treating the ore found in the upper portion of the property.

4.—Repeated examinations have been made by skilled engineers, and they unite in bearing testimony to the extraordinary quantity of gold-bearing ore which is to be found on this property, and although these gentlemen think that the ore will yield far more, the directors prefer to put the probable percentage of gold at 1 oz. to the ton, while the total cost of mining, &c., is estimated not to exceed 12s. per ton. It will thus be seen that enormous profits may be anticipated to result from the operations of this company.

5.—The character of the ore is very workable, and is not refractory, either from an admixture of sulphides or other cause, and consequently the mining can be carried on at the lowest possible expense.

6.—The climate is perfectly healthy, and work can be prosecuted during the entire year.

7.—The estate has an ample supply of water for the future workings of the ore, and for hydraulics, but it will be necessary to provide reservoirs so as to be quite secure in the driest seasons.

8.—With proper superintendence the native Kaffir labour will answer all the requirements of the mines, and this can be procured in abundance and at a most moderate rate.

9.—The mining rights are derived from a lease and concession (a copy of which can be seen at the offices of the company's solicitors) granted in 1882 by the Transvaal Government, subject to the concessionaires compensating the miners who were at that time working on different claims for the direct loss which they may suffer through the revocation of the proclamation of this area as public gold fields. The value of the property may be in some degree estimated by the amounts claimed by six of these miners, which exceeded £50,000, although only a very small portion of the area of the estate (under 50 acres) was occupied by them and their mining appliances were of a very primitive description. These claims have

been adjudicated upon by the Government and the vendors out of the purchase price undertake the payment of all compensation payable to the diggers under the conditions of the concession.

10.—The directors have been advised by one of the most eminent Transvaal lawyers that the vendors' title to the concession and lease is perfectly valid, and the form of transfer to be used in vesting the property in the company has been duly settled by him.

11.—It is intended to proceed vigorously with the development of the property so as to obtain quick returns, and it is confidently anticipated that within a short time very large profits will be made. With this view it is proposed at once to send out the necessary crushing and dressing machinery, in addition to dealing with as large a quantity of the alluvial deposit as may be found practicable.

12.—The directors feel that they cannot better and more satisfactorily recommend this enterprise to the investing public than by adopting the words of the eminent mining engineers, Messrs. Rickard Bros., when they say, "The chief characteristics of Graskop are:—

- (a) The diffusion of the gold, or, in other words, the abundance of the material.
- (b) The free nature of the gold due to its disassociation with sulphides or other substances which so frequently render its separation difficult and wasteful.
- (c) The soft or easy nature of the rock and matrix, favouring rapid development and cheap mining and milling.
- (d) The presence of a good water supply, which our agent assures us can be relied upon throughout the year to furnish milling power to the extent of 100 tons per diem.
- (e) The generally favourable conditions as to climate and labour, the uplands of the Transvaal being very healthy, and native labour good, and at low rates.

13.—The information contained in this prospectus is derived from the numerous reports which have been made on the property, and these full and detailed reports, as well as the assays of the samples of the ore sent to this company, can be seen at the offices of the company. Samples from the reefs can also be seen at the offices of the company.

14.—The preference shares now offered for subscription to the public will, in the first place, be entitled to a cumulative preference dividend of £10 per cent. per annum, and the balance of profit resulting from the operations of the company will, after paying £10 per cent. dividend on the ordinary shares, and providing a reserve fund, be distributed among all the shares of the company, so that each preference share shall receive one-half the amount of additional or bonus dividend paid on each ordinary share. The holder of fully paid-up preference shares will at any time be entitled to exchange his preference for ordinary shares.

15.—The £1 ordinary shares of the Transvaal Gold Exploration and Land Company (the owners of properties adjoining the Graskop estate) have already attained 75 per cent. premium, and can only be bought occasionally.

16.—The only contract entered into is an Agreement dated the 29th day of June, 1883, between Adolf Holland, Adolf Ostrowski, and Samuel Siegmund, of the one part, and R. H. Phillips, for and on behalf of this company, of the other part, whereby the property is acquired for the sum of Fifty Thousand Pounds in cash, and Two Hundred Thousand Pounds in fully paid up ordinary shares of the company. All preliminary and other expenses up to the allotment of shares will be paid by the vendors.

17.—A copy of this Agreement, and the Memorandum and Articles of Association, may be seen at the offices of the Company's Solicitors.

18.—Prospectuses and Forms of Application can be obtained from the Secretary, Solicitors, Auditors and Bankers of the Company.

31, LOMBARD STREET, LONDON, E.C.,  
July 10th, 1883

### ROLLER JAW STONE BREAKER.

The stone-breaker is now so largely used in connection with mining that several attempts have been made to facilitate the replacement of the wearing portions without necessitating a long stoppage of the machine. Among the latest inventions of this class is that of Mr. S. L. MARSDEN, of New Haven, U.S., who claims that he can now construct a less expensive and more durable and effective machine than that hitherto produced. In place of the flat fixed jaw plate in common use in stone and ore crushers of this class a cylindrical jaw is used, which is preferably constructed in cylindrical sections, but may consist of a single casting, and may have either a smooth or a corrugated crushing surface, or the surface may be provided with teeth or studs. This improved jaw has the advantage of presenting a broader wearing surface than a flat plate in a frame, and the said jaw may when one face is worn be turned to present a fresh or unworn face towards the opposite jaw, and the relative positions of the sections may be changed at will, so that all may be made to sustain an equal amount of wear. Preferably these sections are cast with a central bore and a surrounding ring of holes. In the bore of each section is fixed a cross bar, by which the sections may be raised or lowered, and in the said holes pins may be inserted for holding the sections in position. The cylindrical jaw rests on lugs projecting inwards from the sides of the frame, and is held down in place by a key that lying across the top of the upper section is passed through the slots of the hopper frame plates, and through lugs that are formed on the said plates, especially for the reception of the said key.

The improved moveable jaw plate has a corrugated concave face whose curve corresponds with that of the fixed cylindrical jaw, being in its general outline equidistant therefrom at every point throughout its width. Hence it will be seen that a wider crushing surface is afforded by these curved jaws than there would be by straight or flat jaws of the same breadth, and these curved or convex and concave jaws not only present a more extended crushing surface but they are also especially adapted because of their curves to the crushing of slabs or plates of stone, or other substance which are apt to pass unbroken, or but partially reduced, out from between the ordinary flat jaws. The moveable jaw plate is adapted to be fixed in place with either end uppermost, and it may have its face bevelled off at either or both ends if it be desired to enlarge the opening between the jaws at the top or bottom thereof. The said plate is held in place partly by studs that project from the swinging jaw, and enter inclined plate sockets and partly by a screw bolt.

On the outer faces of the hopper frame plates are lugs that form jaws or sockets for securing the hopper in place. The toggle lever employed resembles a form that has been hitherto used, but it has been found desirable to substitute for the car in that lever a renewable and adjustable concave bearing which is set in a corresponding socket made in the back of the head of the said lever, and is made adjustable therein by means of a set screw or screws. The toggle block is also made vertically adjustable by means of an attached screw that passes up through the frame, and has a nut on its upper end. The toggle block has also a socket in its face in which is adjustably held by a set screw, a fulcrum or bearing which projects into the concavity of the lever bearing. In the face also of the toggle lever is a socket in which is adjustably held by a set screw a toggle bearing or fulcrum, and in the back of the swinging jaw a toggle bearing or fulcrum is adjustably held by a set screw in a socket.

### Original Correspondence.

#### GOLD MINING IN VENEZUELA.

SIR,—My attention has been called to a short paragraph in last week's Journal in which I find mentioned the discoveries of gold in the region of the Rivers Tesorero, Santa Cruz, and Guarataro, all of which are within the boundaries of the Bolivar estate, to which I succeeded at the death of my father, the late John Bird. I can fully endorse the statements of your correspondent, as during my stay in the country I made it my special business to thoroughly test the many reports which were in circulation from Capt. Prince, Capt. Brown, Mr. Wulff, and Prof. Vincent, and others, before Venezuela became so intimately known to our investing public, and from my own knowledge I unhesitatingly adhere to my prognostications published in your paper some years ago, after my first visit to the estates—"That Venezuela would in time prove to be one of the richest gold-bearing countries," and experience has confirmed my conviction.

Being in possession of the properties north and south of the celebrated Quebrada Company's mines, I naturally take a deep interest in anything which is calculated to develop the same, as the 450,000 acres which I possess not only contain gold, silver, and copper, but also coal, which has been proved, and given highly satisfactory results. There is no doubt that since the well-known firm of Messrs. Matheson completed the Bolivar and Caracas Railways the country has assumed a very different position to that which it formerly occupied, and if you, or any of your subscribers, require any information as to a country teeming with mineral, timber, and other wealth, I shall only be too happy to furnish any details in my power respecting Venezuela.

W. W. BIRD.

Palmerston Buildings, July 20.

#### WEST CARADON MINE.

SIR,—Please allow me space in the Mining Journal to direct attention to this mine. The company commenced operations about three years ago, and since that time a portion of the sett has been detached and is being worked as West Gonamena. But against that may be placed the present greatly improved condition of West Caradon Mine, including the recent important discovery of Gilpin's lode, which has been missed for a number of years. According to last reports from the agents the yield is about 11 tons of ore per fathom in the aggregate, and is very rich in quality.

At the last sale at Truro in May 128 tons of ore were sold for 742l., or an average of 5l. 15s. 10d. per ton. South Caradon ore sold at the rate of 5l. 4s. 9d. per ton, and Devon Consols at 1l. 16s. 7d. per ton only—average prices, showing that the price made for the West Caradon ore was the highest of any at the sale. The financial position of the property is also sound and good, the balance-sheet of January showing a balance of assets over liabilities of 770l., and a call unnecessary; while at the last meeting of the company, held in May, the balance in favour of the adventurers was still 514l., and only a nominal call of 6s. per share was made.

King's Norton, July 19.

H.

CORRESPONDENCE.—All communications in reply to letters published should, to ensure attention for the current week, reach the office not later than Thursday morning. We must again repeat that letters in the Correspondence columns can only be replied to through the same channel. All letters reaching the Mining Journal in reply are, however they may be addressed, or when in blank envelopes, opened; and the enclosure is published or destroyed at the discretion of the Editor, but never forwarded to the correspondent replied to.

**SPANISH MINES.**—The OWNER of some VALUABLE MINES is willing to MAKE ADVANTAGEOUS ARRANGEMENTS with a Gentleman possessing £1000, or more.  
Address, "Mines," 8, Albany-street, Regent's Park, N.W.

**TO CAPITALISTS, PROMOTERS, AND OTHERS.**  
THE OWNER of a VALUABLE LEAD SETT, who has been working it for some time on his own account, REQUIRES ADDITIONAL CAPITAL to bring it into most successful condition. From one lode—there are five or six in the sett—they can break lead, copper, mundic, sphatose iron, capel, and quartz, and the mineral can be trammed on board ship within 400 yards. There is a never-failing stream of water, abundance of timber, no land carriage, dues 1-18th, falling to 1-20th when machinery is erected, and nothing to pay for coming in.  
The mine is on the same belt that has proved to be the richest in Europe for silver, Old Treburgett and Pengenna being also on it, and the ore can be raised and put on board ship for what many mines have to pay for carriage alone, so that profits could be earned even at present price of lead.  
For particulars address, "W. P.," care of MINING JOURNAL Office, 26, Fleet-street, London, where photograph and plan of the property can be seen.

**AN ENGINEER**, who has had very extensive experience in the Designing, Constructing, and Management of Chemical and Metallurgical Works, is OPEN to an ENGAGEMENT. Special experience in the treatment of mixed ore, containing Zinc, Lead, Copper, and Silver.  
Address, "J. W. C.," Morriston, R.S.O., South Wales.

**TO CAPITALISTS.**  
AN EXTENSIVE MINE SETT, in the best silver-lead district in Cornwall, with rich ore showing itself close to the surface, may be SECURED ON FAVOURABLE TERMS.  
For particulars, address to "Miner," 24, Gilbert-road, Kennington, London, S.E.

**WATSON BROTHERS' MINING CIRCULAR.**  
WATSON BROTHERS,  
MINEOWNERS STOCK AND SHARE DEALERS &c.  
1 ST MICHAEL'S ALLEY, CORNHILL, LONDON.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always selected that on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.  
Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommendation to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—  
That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.  
Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.  
We have for some months past called constant attention to two very important points at the Prince of Wales Mine, and, as they are now developed sufficiently to enable the agent to give his almost positive opinion upon them, he writes this week, so we think it time to refer to them more particularly, and especially as we may have one of the greatest mines in the county, if what is now stated proves to be correct. When we started Prince of Wales some years ago, and out what is known as the Prince of Wales lode, shares rose from 5s. to 3l. and 3l. 10s. per share, and the mine paid good dividends for some time. Then, the engine being too small was overpowered by the water, and as the lode going west became smaller and poorer the company was wound up, the shareholders not feeling disposed to go to the expense of larger machinery. The present company then purchased the mine, put up powerful machinery, and have to the present time spent from 12,000l. to 15,000l.: 25 fathoms from the shaft the lode took a bend or inclination south, and this south part was driven upon for a considerable distance, as it was supposed to be the main lode. Indications, however, some time ago led the present agent to think differently, as at the 77 west on reaching a cross-course (as we stated at the time it appeared) there was a great rush of water, which not only coated picks and other things put into it with copper, but washed out some of the finest stones of ore we ever saw. One of the first of these, now before us, is supposed to be at least 90 per cent. of copper, and we made up our minds when we first saw it that there must be a lot of ore somewhere near at hand; a cross-cut was, therefore, put out, and after driving some fathoms along the cross-course a lode was cut; but the water was too strong to enable us to work on it, and it was necessary to drive a similar cross-cut at the 90 to drain it. This cross-cut has now intersected the lode, which is 6 ft. wide, with very rich stones of ore in it; and the agent is now positive in his own mind that this is the main Prince of Wales lode, and is, therefore, whole to surface.

If this be so, its importance can scarcely be overrated, for as the lode at the 77 and 90 get clear of the cross-course it may become very productive, and then a similar short cross-cut will be put out at the 50, and we may have a very rich mine. It is quite clear also that from 25 fms. from the shaft, all the levels were driven on the south lode or branch, for at the same point at the 77 and 90 the main level has been intersected. These cross-cuts at the 77 and 90 have taken time and money, and have tried our patience as well as that of the shareholders generally, but we have never once lost faith in the result, and have continued to be, through good report and bad report, among the largest shareholders in the mine.

We understand that the Duchy agent, as well as others, concur in the opinion of Capt. Roberts, and if it prove correct, not only is there a whole mine to surface, but a considerable length to drive back at the lode to the point where the south branch diverged from it, so that levels can be at once opened east and west on both ends at the 77 and 90.

D'Kresby Mountain is looking better; one slope is worth 2 tons of ore per fathom.

It will be seen that at the Cornish Ticketing on Thursday the ore averaged about 10s. per unit. The average produce of the ore sold was 5½, the average price 2l. 14s. Most of the Devon Consols ore sold under 1l. 10s. per ton—923 tons realising only 1,398l. 15s. 6d. Gunnislake (Clitters), 452 tons, brought 2038l. 1s. Some of the South Caradon ore brought 15l. 12s. per ton. The Prince of Wales averaged over 4l. per ton; and the mine has for sale 3 tons of copper precipitate averaging 41 per cent., which should bring over 20l. per ton.

It will be seen that the dividend at Wheal Crebor is 2s. 6d. per share, or 1500l., and the richest part is now in the bottom of the mine, which augurs well for the future.

## ALICE HOLT WOODS, FARNHAM.



By Order of the Commissioner in charge of Her Majesty's Woods, Forests, &c.  
**TO BE SOLD, BY AUCTION.**  
By MR. J. HARRIS,  
At the Bush Hotel, Farnham, on Monday, July 23rd, 1883.  
(Luncheon at 1:30; Sale to commence at 2:30)  
1,095 OAK FLITTERS.  
78½ CORDS of OAK WOOD.  
9,047 OAK BAVINS.  
(The produce of Alice Holt Woods.)  
Catalogues may be obtained of the Hon. G. W. LASCELLES, Queen's House, Lyndhurst; or of Mr. LINTOTT, Holt Side (who will depulse a person to show the lots); and of the Auctioneers, Winchester.

## BERE WOODS, WICKHAM, HANTS.



By Order of the Commissioner in charge of Her Majesty's Woods, Forests, &c.  
**TO BE SOLD, BY AUCTION.**  
By MR. R. AUSTIN,  
At the King's Head, Wickham, on Wednesday, July 25th, 1883.  
(Luncheon at 1:30; Sale immediately after)  
1,373 OAK FLITTERS.  
80½ CORDS of OAK WOOD.  
16,513 OAK and BAVINS.  
Catalogues may be had, and further particulars obtained, from the Hon. G. W. LASCELLES, Queen's House, Lyndhurst; Mr. JOHN BROOMFIELD, Foreman, Bere Woods; and of the Auctioneers, Bishop's Waltham.

## NEW FOREST, HANTS.



By Order of the Commissioner in charge of Her Majesty's Woods, Forests, &c.  
**TO BE SOLD, BY AUCTION.**  
At LYNDHURST,  
By MESSRS. F. ELLEN AND SON,  
On Tuesday, July 24, 1883, at Three o'clock in the afternoon, about  
100 PIECES of ROUND OAK TIMBER.  
14,000 OAK FLITTERS. Also about  
40,000 SCOTCH FIR POLES, suitable for Pit Props.  
The Lots may be viewed, and further particulars obtained, on application to the Hon. G. W. LASCELLES, Queen's House, Lyndhurst; or to the Auctioneers, Andover.

## CARDIGANSHIRE.

## VALUABLE LEAD AND COPPER MINES FOR SALE.

MR. O. DANIEL has received instructions from ALFRED AUBREY BROAD, Esq., Liquidator of the Cambrian Mining Company (Limited), TO SELL, BY AUCTION, at the Lion and Gogerdian Arms Hotel, Aberystwith, on Monday, July 23rd, 1883, at Three o'clock in the afternoon, the VALUABLE MINES known as the

## ESGAIR HIR SILVER-LEAD AND ESGAIR FRAITH COPPER MINES.

Situate about eight miles from the Llanfyllbach Station, on the Cambrian Railway, and six miles from the village of Talyllyn.  
These mines have yielded large quantities of both copper and lead of exceedingly rich quality.

The works are replete with costly modern machinery and plant, tramways, dressing floors, water wheels, smiths' and carpenters' shops, offices, manager's house, and a row of cottages for miners, fitted and furnished throughout, stables, sheds, magazines, and all other necessary buildings.

The mines and works are in complete working order, and the property will be sold as a going concern.

The property may be viewed at any time on applying to the Resident Agent; and further information may be obtained of Capt. WILLIAMS, North, R.S.O.

Particulars and conditions of sale may be had of the Auctioneer, Aberystwith, Machynlleth, and Towy; of A. A. BROAD, Esq., 35, Walbrook, London, E.C. Chartered Accountant; of Messrs. HUGH HUGHES and SONS, Solicitors, Aberystwith; or of Messrs. LINKLATER, HACKWOOD, ADDISON, and BROWN, Solicitors, 7, Walbrook, London.

## TUESDAY, JULY 31st, NOON.

## WHEAL PRUSSIA AND CARDREW UNITED MINES.

About midway between Scorrier and Redruth, adjoining the West Cornwall Railway.

MESSRS. W. T. DAVEY AND W. NICHOLL have been favoured with instructions TO SELL, BY PUBLIC AUCTION, on Tuesday, the 31st July, at Twelve o'clock precisely, at the above Mines, the WHOLE of the VALUABLE

## MACHINERY AND MATERIALS

## THEREON, CONSISTING OF:—

- ONE nearly new 70 inch cylinder PUMPING ENGINE, stroke 12 by 10, with three excellent boilers, 36 tons, fitted with Galloway tubes.
- ONE PAIR of 12 inch cylinder horizontal WINDING ENGINE, with capstan and drawing gear complete; 1 7 ton boiler and fittings.
- ONE PAIR of 10 inch cylinder DRAWING ENGINE.
- 200 fathoms of 4 inch steel wire rope, nearly new.
- 250 fathoms of 3½ inch iron wire rope, nearly new.
- 1 6 feet shears and pulleys.
- 3 shaft tackles, landing braces, &c.
- 12½ fathoms of very superior pitch pine rods, 14 to 16 inch.
- Iron and wood bucket rods, forms, seatings, and clacks.
- 30 nearly new 19 inch pumps } With H and door
- 20 ditto 18 inch ditto } pieces to
- 28 ditto 14 inch ditto } match.
- 2 20 inch plunger poles, with stuffing boxes and glands complete.
- 2 10 inch plunger poles, with stuffing boxes and glands complete.
- 1 plunger pole and case, stuffing box and gland, with H and door pieces to match.
- 7 flat and sinking windbores, 15 to 20 inch.
- 4 workings, 2 17 inch and 2 16 inch.
- 12 matchings, 13 to 19 inch.
- 2-0 fathoms of nearly new iron stave ladders.

About 40 pairs of first-class faggotted and rolled strapping plates.  
A superior lot of chain, rod and flange bolts, staples and glands, yokes, bucket prongs, &c., a quantity of railroad iron, tram wagons, 3 powerful winches, 5 large cisterns, 2 smiths' bellows (44 and 42 inch), smiths' and miners' tools, a variety of new steel and iron, grinding stone, &c., wood houses and sheds, a large quantity of launders, new and useful timber, a considerable lot of materials, and other things in general use on mines.

All the machinery, pitwork, and materials are of a very superior description. The pumping engine is considered by competent judges to be one of the finest in Cornwall.

The Lots being very numerous, a prompt commencement of the Sale will be necessary.

Refreshments will be provided at Eleven, and the Sale will commence at Twelve o'clock to the minute.

To view, apply to the Manager, Capt. JOSEPH PRYOR, on the Mines; and for further particulars to R. S. TEAGUE, Esq., Redruth; or the Auctioneers, 4, Station Hill, Redruth.

Dated July 16th, 1883.

## TO BE SOLD, BY AUCTION, CHARLESTOWN IRONWORKS.

ST. AUSTELL, CORNWALL.  
The Trustees of this old-established IRON and BRASS FOUNDRY and ENGINEERING BUSINESS, which since the death of the late Proprietor they have continued to work to its fullest extent, have instructed Messrs. SKARDON and SONS to offer the same, as a going concern, FOR SALE, BY AUCTION, at the White Hart Hotel, St. Austell, on Tuesday, July 24th, 1883, at Four o'clock, together with the Dwelling House and 3½ acres of land.  
Full description of the property appears in this Journal during the months of April and May last.  
For further particulars, apply to M. LOAM, Esq., Liskeard; or Messrs. ROBERTS and DICKSON, Solicitors, Chester.

## IMPORTANT TO MINE OWNERS.

FOR SALE, owing to completion of contract, a complete PLANT of ROCK-DRILLING MACHINERY, comprising—  
ONE AIR-COMPRESSING ENGINE and VERTICAL BOILER, with connections, air receiver, rock drills, and heading stand, 380 yards air supply piping, &c., &c. This Machinery has been driving a cross-cut in hard rock 3 to 4 fathoms per week forward.  
Address, WARSOP AND HILL, NOTTINGHAM.

**STEAM BOILERS FOR SALE, SECONDHAND**, with and without Galloway Tubes, single and double rivetted, working pressure of 60 lbs., 65 lbs., 70 lbs., and 80 lbs. steam pressure VERY CHEAP.  
FIVE BOILERS, 30 feet by 7 feet 6 inches diameter, excellent order.  
SIX BOILERS, 30 feet by 7 feet Galloway Tubes, "  
FOUR BOILERS, 28 feet by 7 feet "  
THREE BOILERS, 26 feet by 7 feet "  
FOUR BOILERS, 24 ft. by 6 ft. 6 in. "  
And other sizes in stock. Equal to new.  
WINDING ENGINES and COLLIERY PLANT of every description, second-hand, in stock. VERY CHEAP. Write to—  
H. HELLERWELL and CO., 4, NORTH CORNHILL  
ROYAL EXCHANGE, MANCHESTER.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the BREAGE UNITED TIN MINES COMPANY (LIMITED).  
ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY, who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby required TO COME IN and PROVE their several DEBTS or CLAIMS at the Registrar's Office, Truro, on Monday, the 30th day of July instant, at Eleven o'clock in the forenoon, or in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are to attend in person, or by their solicitors or competent agents at the time and place above mentioned.  
FREDERICK MARSHALL, Registrar.  
Dated Registrar's Office, Truro, the 18th day of July, 1883.

## LINDRIDGE ESTATE, LEICESTERSHIRE.

FREEHOLD RESIDENTIAL and MINERAL ESTATE of upwards of 300 acres of ARABLE and PASTURE LAND, with MANSION HOUSE and FARM BUILDINGS.

MESSRS. WARNER, SHEPPARD, AND WADE have received instructions TO SELL, BY AUCTION, at the Bell Hotel, Leicester, on Wednesday, the 1st day of August, at Two o'clock in the afternoon, all that VERY VALUABLE FREEHOLD RESIDENTIAL and MINERAL ESTATE, containing upwards of 300 acres of good arable and pasture land, in excellent condition, together with the substantially modern built FAMILY MANSION, known as LINDRIDGE HOUSE.

The greater portion of the estate is let to a substantial tenant, on a lease expiring at Lady Day, 1888.

The Mansion House contains four reception rooms and billiard room, and 19 bed rooms, bath room, &c. Gasworks at the farm supply the house and premises. There is stabling for eight horses, with large coach house, &c. The flower and kitchen gardens and shrubberies contain three acres, with gardener's house adjoining.

The Farm House, which has been recently erected, is a very good one, and has all the necessary offices for a dairy farm. The farm yard and buildings are built on modern principles, and are most ample and convenient in every respect. There is good shooting on the estate, and trout fishing in the stream which runs through it.

There is also a labourer's cottage, with barn and buildings adjoining, and two other cottages fronting the road from Desford to Market Bosworth.

Valuable beds of coal have been proved by boring on the estate. Sections and plans will be annexed with particulars, and produced at the sale, by which it will be seen that the seams, with the exception of a fault common in all coal fields, lie in their natural and undisturbed order.

The first seam, which is 4 feet in thickness, lies 285 feet from the surface. The next seam, which is 7 feet 6 inches thick, lying at 300 feet. The next being 4 feet thick, and below these the other seams lie in regular succession.

Although the existing shaft has been sunk upon the fault, a small outlay would make it available for working the horizontal coal seams adjacent, and a first-class colliery might at once be established.

There is valuable brick earth on the estate, and an engine and boiler house and kiln are already erected.

The estate is near to the Desford station on the railway from Leicester to Burton, and is about nine miles from Leicester.

Plans and particulars of the estate, sections of the coal seams, and further information may be obtained from the Auctioneers, Leicester: Mr. BOLLETON, Land Agent, Leicester; Messrs. PEACOCK and GODDARD, Solicitors, 3, South Square, Gray's Inn, London; Messrs. FREER, BLUNT, and ROWLAND, Solicitors, Leicester; and of Messrs. THOMPSON, PHILLIPS, and EVANS, Solicitors, Stamford.

## IMPORTANT NOTICE.

TO BE SOLD IMMEDIATELY, the NORTH PANTY NE LEAD MINE. The mine has recently been put in thorough working order. Five men are working below at present. A fair sample of ore is now to be seen on the bank, also at the washing place.

The works can be seen any working day by applying to the Captain.  
For particulars, apply to AMB. CHAMP, Pantasaph, near Holywell, North Wales.

ON SALE.—FOUR LANCASHIRE BOILERS, 30 feet by 7 feet. Shells double rivetted, and Bowling expansion rings in flues.

THREE ditto, 30 feet by 7 feet, with plain flues.

THREE ditto, 30 feet by 7 feet 3 inches, with six Galloway tubes in each flue.

THREE ditto, 26 feet by 7 feet, with four Galloway tubes in each flue.

EDWARD RATCLIFFE, HAWARDEN, NEAR CHESTER.

ON SALE.—THREE LANCASHIRE BOILERS, 32 feet by 6 feet 9 inches; now working at 70 lbs under Insurance, near Manchester. Cheap if taken at once.

EDWARD RATCLIFFE, HAWARDEN, NEAR CHESTER.

FOR SALE, a 30 H.P. PORTABLE STEAM ENGINE has link-motion reversing gear, with winding and pumping gear complete.

A 16 H.P. PORTABLE WINDING and PUMPING ENGINE  
Also a 6 H.P. PORTABLE HOISTING ENGINE.

To be seen at—

BARROWS AND STEWART'S WORKS, BANBURY, OXON.

FOR SALE, very good 40 inch cylinder PUMPING ENGINE, TWO AIR COMPRESSORS, ONE ORE CRUSHER, and a 10 ton FLY WHEEL and SHAFT.

Apply to CORNELIUS BAWDEN, Redruth.

## MINE "EL CALAO," GUAYANA, VENEZUELA.

COUPONS OF SHARES ..... 322  
Gold in bars produced in the month of May, 1883, and re-mitted to Messrs. Baring Brothers and Co., London, 10,986-03 ozs.  
DIVIDEND distributed for each coupon, \$400.

(Signed) A. LICCIONI, President.  
(Signed) VICTOR T. GRILLET, Treasurer.

COLLEGE OF PRACTICAL ENGINEERING  
MUSWELL HILL, N.

PRINCIPAL—JOHN BOURNE, C.E.

The Committee consists of Fifty Experienced Engineers, including Sir J. G. Alleyne, Bart., Sir John Anderson, Sir Henry Bessemer, Sir R. M. Stephenson, Sir Joseph Whitworth, Bart.; Messrs. Charles Manby, W. H. Maudslay, John Penn, R. Rawlinson, C.B., J. D'A. Samuda, and others equally eminent.

For particulars, write to the Secretary.

## METALLURGICAL DEPARTMENT, KING'S COLLEGE, LONDON.

Under the direction of PROF. A. K. HUNTINGTON.

In the Laboratory, Extraction and Manufacturing Processes are investigated. Assays and Analyses made, and Metals and Alloys are examined, with the aid of powerful Testing Machinery, as well as Chemically.  
A FEW FREE ENTRIES to the DIVISION of STUDIES (day or evening) are obtainable through the CITY and GUILDS' INSTITUTE.

## SUMMER TOURS IN SCOTLAND.

GLASGOW AND THE HIGHLANDS.  
ROYAL ROUTE VIA CHINAN AND CALEDONIAN CANALS. Royal Mail Steamer COLUMBA or IONA, from GLASGOW daily at Seven A.M., and from GREENOCK at Nine A.M., conveying, in connection with his West Highland Steamers, PASSENGERS for OBAN, FORT WILLIAM, INVERNESS, LOCHABE, SKYE, GAILLOCH, STAFFA, IONA, GLENCOE, ISLAY, STORNEWAY, &c.  
Official Guide, 2d.; Illustrated, 6d. and 1s. by post: or at W. H. Smith and Son's Railway Bookstalls.  
Time Bill, with Map and Fares, free from the Owner, DAVID MACBRAYNE, 119, Hope-street, Glasgow.

CAPITALISTS AND OTHERS, who are anxious to share in the steadily increasing advantages resulting from the Smoke Abatement Movement, as practically illustrated at South Kensington, may now secure the LEASE of a VALUABLE ANTHRACITE COAL PROPERTY, situated within fourteen miles of the Port of Swansea. Intersected by the Midland Railway, having also canal communication with the Port. A good colliery can be made for a limited outlay. The veins of coal underlying the estate can be seen by means of a level now opened on them, and by which the colliery will be kept water free.  
For rents, royalties, &c., apply in the first instance to Messrs. R. C. FISHER and SON, Mining Engineers, Swansea.

ESTABLISHED 1883.  
MESSRS. CUNLIFFE, ENTWISLE, AND CO.,  
FINANCIALISTS,  
MINING AND CONSULTING ENGINEERS,  
MINERAL ASSAYERS,  
STOCK AND SHARE BROKERS,  
77, BLOOMSBURY, OXFORD STREET; AND 2, UPPER BROOK STREET  
MANCHESTER.  
Bankers: Manchester and Oldham Bank (Limited),  
Fell Hall, Manchester.

# NOBEL'S DYNAMITE



Manufactured and sold by  
**NOBEL'S EXPLOSIVES COMPANY, LIMITED**  
 (FORMERLY THE BRITISH DYNAMITE COMPANY LIMITED),

Head Office: 149, West George Street, Glasgow.  
 EXPORT AGENTS: JAMES THORNE AND CO., 85, GRACECHURCH STREET, LONDON, E.C.

Factories:--ARDEER WORKS, STEVENSTON, Ayrshire.  
 WESTQUARTER WORKS, POLMONT STATION, STIRLINGSHIRE.  
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## THE COTTON POWDER COMPANY (LIMITED)

RECOMMEND TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, THEIR

### TONITE, OR COTTON POWDER,

AS BEING THE SAFEST, CHEAPEST, AND STRONGEST OF ALL EXPLOSIVES.

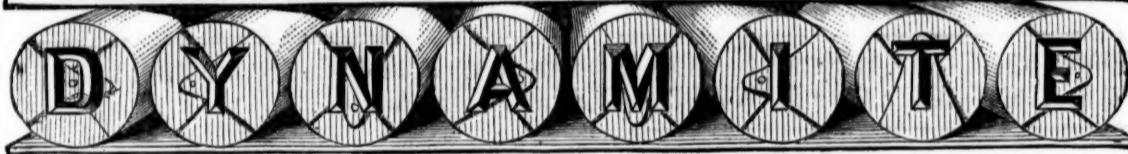
TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any Nitro-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

The Company also manufacture PATENT DETONATORS of a quality much superior to the foreign article. The trade supplied on favourable terms.

**23, QUEEN ANNE'S GATE, LONDON, S.W.**  
**WORKS: FAVERSHAM, KENT.**

Agents: DINEEN and Co., Leeds; DAVID BURNS, Halthistle; R. J. CUNNACK, Helston, Cornwall; J. and W. SMITH, Chapel-en-le-Frith; W. VEITCH, Jedburgh, N.B. W. HARRISON, Barrow-in-Furness; W. J. PARRY, Bangor; HUNTER and FOTHERINGHAM, Glasgow.

## RHENISH DYNAMITE COMPANY.



OF THE GREATEST STRENGTH ALLOWED BY THE EXPLOSIVES ACT.

Head Office: JOHN DARLINGTON,  
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## DEUTSCHE SPRENGSTOFF ACT.-GES.

(GERMAN EXPLOSIVES COMPANY, LIMITED),

HAMBURG.



## DYNAMITE

Of the HIGHEST DESCRIPTION, and of the maximum strength allowed by the British Explosives Act (75 per cent. Nitroglycerine).

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 GENERAL MANAGERS Mr. C. F. CARSTENS, } Late Partners of Messrs. A. Nobel and Co., of Hamburg,  
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SHIPMENTS EFFECTED TO ALL PARTS. STOCK KEPT IN LONDON AND NUMEROUS COUNTRY MAGAZINES.

AGENTS WANTED IN THE COLONIES.

## BRAUN AND BLOEM'S

CELEBRATED

## DETONATORS-"EAGLE" BRAND.

TRADE



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No implements required for opening inner tin box, thereby avoiding any danger arising from opening same with tools, as generally used.

Sold by WM. BRODERSEN, 79, Leadenhall-street, London, E.C.  
 SOLE AGENT FOR THE UNITED KINGDOM AND THE COLONIES.

For Excellence  
 and Practical Success  
 of Engines.



Represented by  
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**HARVEY AND CO.,**  
 ENGINEERS AND GENERAL MERCHANTS  
 HAYLE, CORNWA

LONDON OFFICE:--186, GRESHAM HOUSE EC.

MANUFACTURERS OF  
 PUMPING and other LAND ENGINES and MARINE STEAM ENGINES  
 of the largest and most approved kinds in use, SUGAR MACHINERY,  
 MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL.

SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF  
 HUSBAND'S PATENT PNEUMATIC STAMPS

SECOND-HAND MINING MACHINERY FOR SALE,  
 IN GOOD CONDITION, AT MODERATE PRICES--viz.

PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES,  
 STEAM CAPSTANS; ORE CRUSHERS; BOILERS and PITWORK of  
 various sizes and descriptions; and all kinds of MATERIALS required for  
 MINING PURPOSES.



**PACIFIC IRON WORKS,**

RANKIN, BRAYTON, AND CO.,

For Copper and Argentiferous Galena Ores

GENERAL OFFICE AND WORKS,  
 San Francisco, Cal., U.S.A.

BRANCH WORKS:--CHICAGO, ILLINOIS, U.S.A.

The Pacific Water Jacket Smelters embrace many features that are entirely new and of great practical utility, which are secured by letters patent.

No other furnaces can compare with these for durability, and in capacity for continuous and interrupted work.

More than One Hundred of them are now running in the various mining districts of the United States, giving results never before obtained as regards continuous running, economy of fuel grade and quality of bullion produced.

These Smelters are shipped in a complete state, requiring no brick or stone work, thus saving great expense and loss of time in construction.

Complete smelting plants made to order, with all the improvements that experience has proved valuable in this class of machinery. Skilled and experienced smelters furnished when desired to examine mines and to superintend constructing and running of furnace. Estimates given upon application. Send for circular.

THE  
 BEST METAL FOR BUSHES,  
 BEARINGS,  
 SLIDE VALVES,

And other wearing parts of Machinery.  
 PUMPS, PLUNGERS,  
 CYLINDERS, &c.

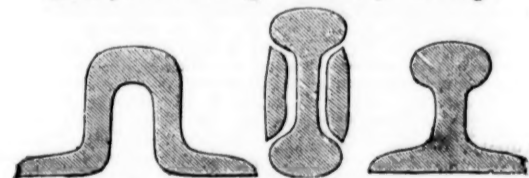
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**PHOSPHOR BRONZE**  
**COMPANY, LIMITED,**  
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**JOHN BEATSON & SON,**  
 40h, St. Mary's Gate, Derby.



IRON AND STEEL RAILS, of all sections, from 10 to 86 lbs. per yard, new perfect, new slightly defective, or second-hand, with Fish-plates, Bolts and Nuts, Chairs, Spikes, and Points and Crossings to match, when required.

STEEL AND IRON WIRE ROPES, LOCOMOTIVE ENGINES, &c., &c.  
 BARS, PLATES, SHEETS, &c.  
 STEEL OF ALL KINDS. FISH IRON OF ALL KINDS.  
 Deliver at all Railway Stations and Ports in Great Britain.

## WILLIAM BENNETTS.

PATENT MINERS'

**SAFETY FUSE**  
**MANUFACTURER.**



This manufacture embraces all the latest improvements for use in Blasting in Mines, Quarries, or for Submarine Purposes and is adapted for exploding Gunpowder, Dynamite, or any other Explosive; and is made suitable for exportation to any part of the world. Price Lists and Sample Cards on application.

All communications to be addressed--

**ROSKEAR FUSE WORKS,**  
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**W. TREGAY, MINING ENGINEER, REDRUTH.**  
 (Established upwards of a Quarter of a Century)  
 ADVISES ON ALL MINING MATTERS.

## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
3200 Blue Hills, t, c, St. Agnes	4 0 0	7 1/2	7 1/2	52 11 0	0 10	Nov. 1881
6000 Carr Breck, t, c, Illogan	11 7 11	7 1/2	6 1/2	52 11 0	0 10	Nov. 1881
4000 Craigant Buck, t, c, Cardigan	5 0 0	—	—	5 0 0	0 5	Nov. 1882
12400 Devon Gt. Consols, t, c, Tavistock	1 0 0	4 1/2	3 1/2	118 7 0	0 6	Dec. 1880
4236 Dolcoath, t, c, Camborne	10 14 10	60	60	135 16 0	1 0	Apr. 1883
12000 East Pool, t, c, Illogan	0 9 9	41	37 1/2	36 3 0	1 0	June 1883
12000 Great Holway, t, c, Flintshire	5 0 0	5 1/2	5 1/2	5 0 0	0 5	Feb. 1882
15000 Great Laxey, t, c, Isle of Man	4 0 0	17	16 1/2	29 13 0	0 5	July 1883
6400 Green Hurth, t, c, Durham	0 0 0	8 1/2	7 1/2	4 1 0	0 5	Nov. 1882
20000 Grogwinion, t, c, Cardigan	2 0 0	3 1/2	3 1/2	4 1 0	0 5	Nov. 1882
9830 Gunnsike (Clitters), t, c	2 0 0	3 1/2	3 1/2	4 1 0	0 5	Nov. 1882
2800 Isle of Man, t, c, Isle of Man	25 0 0	—	—	83 5 0	1 0	Sept. 1882
6000 Killbreth, t, c, Chacewater	4 0 0	2 1/2	1 1/2	0 10 0	0 1	June 1882
20000 Leadhills, t, c, Lanarkshire	6 0 0	2 1/2	2 1/2	1 2 0	0 1	June 1883
4000 Libburn, t, c, Cardiganshire	18 5 0	—	—	615 0 0	0 10	June 1883
10000 Mellanear, t, c, Hayle	2 0 0	3 1/2	3 1/2	2 3 0	1 0	July 1883
9000 Minera Mining Co., t, c, Wrexham	5 0 0	6	4	69 8 0	2 0	Jan. 1883
2000 Mining Co. of Ireland, t, c, t	7 0 0	—	—	24 0 0	0 2	Jan. 1880
11829 North Hendre, t, c, Wales	2 10 0	—	—	3 18 0	0 4	Nov. 1882
8146 Ditto	1 5 0	—	—	4 16 0	0 2	Nov. 1882
2000 North Levant, t, c, St. Just	13 6 0	2 1/2	1 1/2	3 17 0	0 1	Jan. 1881
4760 Penhalls, t, c, St. Agnes	6 0 0	2 1/2	2 1/2	17 6 0	1 6	Apr. 1883
12000 Rhenish United, t, c, Linkinhorne	7 10 0	7 1/2	7 1/2	9 11 0	0 5	May 1883
12000 Roman Gravel, t, c, Salop	0 10 0	3 1/2	3 1/2	—	—	Jan. 1883
50000 South Caradon, t, c, St. Cleer	0 10 0	3 1/2	3 1/2	—	—	Jan. 1883
6123 South Curdrow, t, c, Camborne	6 0 0	8 1/2	8 1/2	10 5 0	0 6	Apr. 1883
9000 South Darren, t, c, Cardigan	1 10 0	7 1/2	7 1/2	5 1 0	0 4	Apr. 1880
6000 Tincroft, t, c, Pool, Illogan	12 10 0	8	7 1/2	51 3 0	0 6	Dec. 1881
5000 Van, t, c, Llanidloes	4 5 0	5 1/2	5 1/2	25 13 0	0 2	Jan. 1883
2000 West Holway, t, c, Flintshire	1 10 0	1 1/2	1 1/2	3 1 0	0 1	Oct. 1881
6000 West Killy, t, c, St. Agnes	7 10 0	3 1/2	3 1/2	23 8 0	0 9	Mar. 1882
12000 Wheel Crober, t, c, Tavistock	2 4 0	2 1/2	2 1/2	0 18 0	0 2	June 1883
1024 Wheel Eliza Consols, t, c, St. Austell	13 0 0	4 1/2	4 1/2	57 0 0	1 0	May 1883
6000 Wheel Grenville, t, c, Camborne	15 0 0	6 1/2	6 1/2	1 12 0	0 5	Sept. 1882
4295 Wheel Killy, t, c, St. Agnes	5 12 0	1 1/2	1 1/2	12 6 0	1 6	Jan. 1881
3000 Wheel Peavor, t, c, Redruth	10 1 0	4 1/2	4 1/2	8 13 0	0 4	Mar. 1882

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, t, Spain	2 0 0	1 1/2	1 1/2	2 10 0	2 0	Apr. 1883
10000 Almada and Tinto Consol., t	1 0 0	3 1/2	3 1/2	0 6 3	0 1	May 1876
20000 Australian, t, c, South Australia	7 0 0	3 1/2	3 1/2	1 7 6	0 2	Apr. 1882
15000 Birdseye Creek, t, c, California	4 0 0	1 1/2	1 1/2	1 4 0	0 3	Dec. 1882
30000 Bratsberg, t, c, Norway	2 0 0	2 1/2	2 1/2	0 2 0	0 2	Feb. 1883
130000 California, t, c, Colorado	1 0 0	—	—	0 1 0	0 1	Apr. 1883
20000 Cape Copper Mining, t, c, South Africa	0 0 0	50 1/2	46 1/2	53 7 0	2 0	June 1883
65000 Colorado United, t, c, Colorado	5 0 0	2 1/2	2 1/2	2 9 0	1 6	June 1883
50000 Copiapo, t, c, Chile	3 10 0	3 1/2	3 1/2	2 9 0	2 0	June 1883
70000 English & Australian, t, c, S. Aust.	2 10 0	1 1/2	1 1/2	3 2 0	0 2	Mar. 1883
8000 Eng. Aus. & Viet., t, c, prof. (20000 o.)	1 0 0	—	—	0 3 0	0 3	Apr. 1882
25000 Fortuna, t, Spain	2 0 0	3 1/2	3 1/2	8 4 0	0 2	Apr. 1882
60000 Frontino & Bolivia, t, c, New Gran.	2 0 0	2	1 1/2	0 11 0	0 1	Apr. 1883
270000 Henriett, t, c, Leadville, Colorado	1 0 0	—	—	0 0 0	0 0	Feb. 1883
200000 La Plata, t, c, Leadville	2 0 0	1 1/2	1 1/2	0 12 11	0 3	Oct. 1882
8000 Linars, t, Spain	3 0 0	4	3 1/2	19 3 0	0 3	Apr. 1883
20000 Marbella Iron Ore, t, Spain	10 0 0	5	4 1/2	0 10 0	0 0	June 1882
185164 Mason & Barry, t, c, Portugal	10 0 0	14 1/2	14 1/2	0 9 0	0 3	Aug. 1883
65000 New Guadalupe, t, c, Venezuela	5 0 0	4 1/2	4 1/2	0 9 0	0 3	Aug. 1882
1000 Ditto, Debutants	100 0 0	103	93 103	6 per cent.	—	—
50000 Panulillo, t, c, Chile	4 0 0	7	6 1/2	1 12 9	0 6	Apr. 1883
25000 Pitangui, t, c, Brazil (in 6000 £1 pd.)	0 10 0	—	—	0 1 0	0 1	Sept. 1880
1400 Pontgibaud, t, c, France	20 0 0	12	10 12	29 11 0	0 14	Dec. 1882
100000 Port Phillip, t, c, Clunes (22 shares)	1 0 0	3 1/2	3 1/2	1 14 2	0 10	Feb. 1881
50000 Rara Fortuna, t, c, Argent. Republic	1 0 0	—	—	0 3 0	0 1	July 1882
54000 Richmond Consol., t, c, Nevada	5 0 0	7	6 1/2	14 11 0	0 5	May 1883
24532 Rio Tinto, t, c, Mortgage Bds., Huelva	0 0 0	101	102	2 15 0	0 16	May 1880
325000 Ditto, shares	10 0 0	22 1/2	21 22	0 12 9	0 1	May 1882
40000 Santa Barbara, t, c, Brazil	1 0 0	2 1/2	2 1/2	15 p. cent.	—	May 1883
120000 Scottish-Australian Mining Co., t	0 10 0	2 1/2	2 1/2	15 p. cent.	—	May 1883
82000 Ditto, New	0 10 0	1 1/2	1 1/2	15 p. cent.	—	May 1883
22500 Sierra Buttes, t, c, California	2 0 0	1 1/2	1 1/2	2 5 0	0 1	Apr. 1883
40625 Ditto, Plumas Eureka	2 0 0	1 1/2	1 1/2	2 18 0	0 2	Apr. 1883
125000 St. John del Rey (25 Stock and multiple deal in)	0 0 0	100	100	5 p. c. for half-year, June 1882	—	—
160000 Tamarachery, t, c, Wynaad	1 0 0	3 1/2	3 1/2	0 6 0	0 6	Aug. 1882
91996 Tharsis, t, c, Spain (31000 £1 pd.)	10 0 0	—	—	34 1 0	0 25	May 1883
20000 Toluca, t, c, Colombia (A & B shares)	5 0 0	6 1/2	6 1/2	0 13 10	0 0	Feb. 1881
25000 Victoria (London), t, c, Australia	1 0 0	—	—	0 2 0	0 0	June 1882
100000 Victoria (Nevada), t, c, Deb. Bds.	1 0 0	—	—	0 2 0	0 0	June 1882
50000 Western Andes, t, c, Colombia	5 0 0	3 1/2	3 1/2	3 18 3	0 2	Mar. 1883
2100 W. Prussian (5500 pref. sh. £10 pd.)	10 0 0	10	9 10	4 2 0	0 8	Apr. 1881
64800 Yorke Pen., t, c, South Aust. Pref.	1 0 0	1 1/2	1 1/2	0 3 0	0 3	May 1882

Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
25000 Aberdona, t, Denbigh	1 10 0	1 1/2	1 1/2
30000 Alston United, t, c, Cumberland	1 0 0	—	—
12000 Anderton, t, c, t, Devonshire	1 0 0	1 1/2	1 1/2
12000 Assheton, t, c, Carnarvonshire	5 0 0	—	—
12000 Bedford Unit., t, c, Tavis. (21 lib.)	0 14 0	1 1/2	1 1/2
30000 Bodidris, t, c, Denbighshire	1 0 0	—	—
10000 Brada, t, c, t, Isle of Man	1 0 0	—	—
30000 British, t, c, t, Wrexham	1 0 0	—	—
30000 Beuno Consols, t, c, Flintshire	1 0 0	1 1/2	1 1/2
20000 Bwlch United, t, c, Cardigan	1 0 0	—	—
12000 Collacombe Consols, t, c, t, Llanrwst	0 2 6	5 1/2	5 1/2
50000 Carn Camborne, t, c, Camborne	1 0 0	1 1/2	1 1/2
20000 Carnarvon, t, c	1 0 0	—	—
37500 Carnarvonshire Cons., t, c, Llanrwst	2 0 0	1 1/2	1 1/2
6000 Cathedral, t, c, Gwynedd	1 3 0	1	1
20000 Central Foxdale, t, c, Isle of Man	1 17 0	—	—
25000 Coal-y-Pedw & Pant-y-Buarth, t, c	1 0 0	1 1/2	1 1/2
2450 Cook's Kitchen, t, c, Illogan	30 14 9	30	22 1/2
10000 Cornwall Great Cons., t, c, Salop	1 0 0	—	—
30000 Creiglog, t, c, Denbighshire	0 17 0	—	—
6400 Crook Burn, t, c, Cumberland	0 17 0	—	—
45000 D'Essey Mountain, t, c, Llanrwst	10 0 0	—	—
12000 Derwent, t, c, Durham	4 0 0	1 1/2	1 1/2
6000 Devon Friendship, t, c, t, Tavistock	1 0 0	6 1/2	6 1/2
12000 Devon Great United, t, c, t, (21 shares)	1 5 0	3 1/2	3 1/2
6000 Drakewalls, t, c, t, Calstock	0 15 0	6 1/2	6 1/2
12000 East Blue Hills, t, c, St. Agnes	0 5 0	3 1/2	3 1/2
6000 East Botallack, t, c, St. Just	1 0 0	1 1/2	1 1/2
6144 East Caradon, t, c, St. Cleer	4 19 0	3 1/2	3 1/2
4000 East Chiverton, t, c, Perranzabuloe	10 17 3	3 1/2	3 1/2
30000 E. Craven Moor, t, c, Pateley Bridge	1 0 0	3 1/2	3 1/2
15000 East Devon Cons., t, c, t, Buckfastleigh	2 0 0	2 1/2	2 1/2
35000 East Herodfoot, t, c, t, Liskeard	1 0 0	1 1/2	1 1/2
20000 East Long Bar, t, c, t, Wales	1 0 0	1 1/2	1 1/2
25500 East Roman Gravel, t, c, Salop	1 0 0	—	—
100 East Tregombo, t, c, t, Marazion	5 0 0	—	—
18000 East Van, t, c, t, Llanidloes	5 0 0	—	—
2048 East Wheel Lovell, t, c, Helston	17 8 6	1 1/2	1 1/2
100000 East Wheel Rose, t, c, t, Newlyn East	1 0 0	—	—
12500 Frongoch, t, c, Cardigan (10000 sh. iss.)	2 0 0	1 1/2	1 1/2
12000 Gawton, t, c, Tavistock	2 0 0	3 1/2	3 1/2
40000 Glasg. Car., t, c, (30000 sh. £1 pd., 10000 15s. pd.)	3 1/2	3 1/2	3 1/2
30000 Gobbett, t, c, Devon	0 1 0	1 1/2	1 1/2
10000 Goddards, t, c, t, Carnarvon	1 0 0	1 1/2	1 1/2
30000 Goginan, t, c, t, Cardiganshire	1 0 0	—	—
25000 Goodveere, t, c, St. Cleer	1 0 0	1 1/2	1 1/2
20000 Goredale and Merioneth Cons., t, c, Flint	2 10 0	3	2 1/2
20000 Great Dyfford (10000 sh. issued)	1 0 0	—	—
6000 Great West Chiverton, t, c, St. Agnes	0 5 0	3 1/2	3 1/2
6000 Great Wheel Worthy, t, c, t, Cornwall	1 0 0	—	—
10000 Gwyn-y-Mynydd, t, c, t, Flint (pref.)	4 0 0	1 1/2	1 1/2
7000 Gwydyr Amal, t, c, t, Carnarvon	1 0 0	—	—
12000 Herodfoot, t, c, t, near Liskeard	1 0 0	6 1/2	6 1/2
18000 Hingston Down, t, c, t, Calstock	0 13 0	3 1/2	3 1/2
20000 Kirmichael, t, c, (20000 unissued)	1 0 0	—	—
25000 Kit Hill Gt. Cons., t, c, t, t, (21 sh.)	0 17 0	3 1/2	3 1/2
15000 Lady Ann, t, c, t, Llanarmon	1 0 0	1 1/2	1 1/2
25000 Langford, t, c, t, t, Caillington	0 10 0	—	—
15000 Llandegla, t, c, t, Wales	1 0 0	—	—
5120 Lovell, t, c, t, Wendron	0 18 0	3 1/2	3 1/2
9000 Marke Valley, t, c, t, Linkinhorne	7 7 0	3 1/2	3 1/2
6000 Medlyn Moor, t, c, t, Wendron	3 15 0	—	—
8000 Mona, t, c, t, Anglesea	5 0 0	4 1/2	4 1/2
20000 Mona Consols, t, c, t, Anglesea	1 0 0	2 1/2	2 1/2
15000 Monkstoun, t, c, t, Devon	2 0 0	2 1/2	2 1/2
20000 Mostyn Consols, t, c, t, Flint	1 0 0	4 1/2	4 1/2
12000 Morfa Du, t, c, t, t, Anglesea	1 0 0	3 1/2	3 1/2
8000 Mounts Bay, t, c, t, Breage	1 0 0	3 1/2	3 1/2
6144 Mount Carbis, t, c, t, Redruth	1 15 0	2 1/2	2 1/2
12000 New Caradon, t, c, St. Cleer	0 5 0	3 1/2	3 1/2
2400 New Cook's Kitchen, t, c, t, Illogan	9 13 6	5	4 1/2
8000 New Dolcoath, t, c, t, Camborne	3 0 0	—	—
100000 New Great Wheel Vor, t, c, Breage	0 10 0	—	—
10000 New Holmbush, t, c, t, t, Caillington	3 0 0	—	—
6000 New Killy, t, c, St. Agnes	0 18 0	2 1/2	1 1/2
15000 New Redmoor, t, c, t, Caillington	1 5 0	—	—
17500 New Tavas, t, c, t, St. Austell	2 0 0	2 1/2	2 1/2
3500 New Tincroft, t, c, t, Lelant	6 0 0	—	—
12000 New Trumpet, t, c, t, Wendron	1 0 0	1 1/2	1 1/2
8000 New Van Cons., t, c, t, Glyn, t	1 0 0	3 1/2	3 1/2
12000 New West Caradon, t, c, t, Liskeard	0 4 6	3 1/2	3 1/2
3000 New Wheel Peavor, t, c, t, Redruth	0 10 0	—	—
35000 New Wye Valley, t, c, t, t, Montgomery	1 0 0	1	1
12000 North Blue Hills, t, c, St. Agnes	0 2 6	3 1/2	2 1/2
5328 North Bury, t, c, t, Scourie	1 18 0	3 1/2	3 1/2
N. D'Essey Mount, t, c, t, t, Carnarvon	1 0 0	—	—
25000 North Goginan, t, c, t, t, Cardiganshire	1 0 0	—	—
6400 North Green Hurth, t, c, t, (3400 1s. pd.)	0 2 6	3 1/2	3 1/2

## NON-DIVIDEND MINES—continued.

Shares.	Collected.			Paid.	Last wk.	Clos. pr.
25000	North Grogwinion, t, c, t, Cardigan	1	0	0	—	—
12000	North Herodfoot, t, c, t, Liskeard	0	13	0	—	—
50000	North Molton, t, c, t, t, Devon	1	0	0	—	—
6000	North Penstruthal, t, c, t, Gwynedd	2	15	0	3	—
2936	North Trekerby, c, St. Agnes	1	0	0	—	—
8000	North, t, c, Durham	8	17	10	—	—
40000	Okel Tor, t, c, a, Calstock	1	0	0	—	—
1000	Old Shepherds t, c, Cornwall	1	0	0	—	—
60000	Owen Vean & Tregur, t, c, t, Marazion	1	0	0	13	1/2
12000	Osora, t, c, t, Carnarvon	2	0	0	—	—
4000	Parya Collocation, t, c, t, Llanes	1	0	0	68	4s.
7500	Pateley Bridge, t, Yorkshire	1	0	0	—	—
6000	Pedd-an-drea, t, Redruth	4	3	0	13	1/2
12000	Pelyn Wood, c, t, Lanivry	0	2	0	—	—
6000	Pennant, t, bar, North Wales	5	0	0	5	—
20000	Penegargre, t, Carmarthenshire	1	0	0	18	1/2
12000	Perran yr-Osred, t, t, Flintshire	1	0	0	18	1/2
10000	Perran Consols, t, t, Flintshire	1	0	0	18	1/2
12000	Perran Wheal Alfred, c	0	2	6	—	—
6000	Polebreo, c, Cornwall	0	12	6	13	1
10000	Polrose, t, c, Cornwall	0	12	6	13	1
10000	Port Nigel Syn, t, c, t, Oarun	30	15	3	—	—
18000	Pr. Patrick, t, t, (als. 12000 p. 10 p. c)	1	0	0	—	—
6000	Prince Royal, t, c, t, St. Agnes	1	0	0	—	—
12000	Prince of Wales, c, t, Calstock	1	4	6	—	—
36000	Russell United, t, c, Tavistock	0	15	6	—	—
30000	Silver Hill, t, Callington	1	0	0	—	—
60000	Sinclair, t, t, t, Whitford	1	0	0	13	1/2
6000	Sinclair, t, t, t, Whitford	1	0	0	13	1/2
6000	South Cardif, t, Redruth	0	10	0	—	—
42000	So. Devon Unit, t, c, t, Buckfast	0	10	0	2	13 1/2
5000	South Dolcoath, c, t, Illogan	0	19	0	—	—
6000	South Penstruthal, t, c, Gwynedd	2	19	0	2	13 1/2
6000	South Tolcarne, t, c, t, Camborne	5	11	6	5 1/2	13 1/2
2043	South Wheal Crofty, c, Illogan	3	19	0	8	13 1/2
8043	South Wheal Frances, t, Illogan	9	14	0	9 1/2	13 1/2
40000	Tamar, t, t, Bearaunt	1	0	0	13	1/2
110000	Tankerville City Consols, t, t, Salop	1	0	0	4	20
12000	Tantivy, t, c, t					